# CERTIFICATION REGARDING THE USE OF RIGHTS GUARD TECHNICAL DATA

- a. The bidder/offeror certifies that he will observe the following data disclosure and use restrictions on all data claimed to be proprietary to the Boeing Company (hereafter called "Rights Guard Technical Data"):
  - 1. Rights Guard Technical Data shall not be reproduced, in whole or in part, except as required to respond to the Rights Guard Solicitation, or to perform any resulting Rights Guard Contract.
  - Rights Guard Technical Data shall not be incorporated, in whole or in part, into other
    documentation, nor shall it be otherwise utilized except as required to respond to the Rights Guard
    Contract.
  - 3. Rights Guard Technical Data shall not be disclosed, in whole or in part, to any other person or entity and shall be disclosed within bidder's/offeror's company only to those employees having a need to know for the purpose of responding to the Rights Guard Solicitation or performing any resulting Rights Guard Contract.
  - 4. Rights Guard Technical Data will be returned or destroyed by all unsuccessful bidders/offerors promptly upon the award of a contract, and by each contractor promptly upon completion of contract performance. Mylars are not to be returned, but certification that they have been destroyed will be furnished. Simultaneously with the return or destruction of all such data, the respective bidder/offeror/contractor shall provide to the government a certification that all Rights Guard Technical Data has been returned or destroyed, as appropriate. This certification shall contain complete listing by drawing number or document number of the data destroyed. Failure to take such actions shall be grounds for removal of the bidder/offeror/contractor from qualifying bidders lists for all Rights Guard Procurements.
- b. CAUTION: The Government will notify The Boeing Company of an actual or suspected breach of he restrictions set forth in this certificate which may come within its knowledge. A violation of such restrictions may be grounds for legal proceedings against the violators by the Government and/or by The Boeing Company.
- c. Rights Guard Certifications shall be made a part of the Government's contract file to which the certification pertains. This file and any related documentation shall be made available to The Boeing Company upon request.

Signature							
Гуреd Name							
Date							

NOTE #1

Rights Guard Certifications that contain alterations deletions or additions will not be accepted, and no Rights Guard Technical Data will be transmitted to any bidder/offeror until an unaltered, properly executed Rights Guard Certification has been received by the Government.

NOTE #2

Any previous unmarked KC-135R Data previously furnished by the U.S. Air Force and not having the "Boeings Proprietary Rights Legend" on it will be marked with the following legend before use of such data:

Government Purpose License Legend

Contract No. Settlement Agreement in CL. ct. No. 309-89C

Contractor: The Boeing Company

Government Purpose License Rights shall be effective until otherwise mutually agreed by the government and Boeing.

The restrictions governing use of technical data marked with this legend are set forth in the definition of "Government Purpose License Rights" in paragraph (a)(14) of the clause at DFARS 252.227-7013 (Oct 1988). This legend, together with the indications of the portions of this data which are subject to Government purpose license rights, shall be included on any reproduction thereof which includes any part of the portions subject to such limitations.

CONTRACT DATA REQUIREMENTS LIST Form Approved (1 Data Item) OMB No. 0704-0188 Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the government Issuing Contracting Officer for the Contract/PR No. in Block E. A. CONTRACT LINE ITEM NO. B. EXHIBIT C: CATEGORY: TESTING AND INSPECTION Α TDP OTHER D. SYSTEM/ITEM E. CONTRACT/PR NO. F. CONTRACTOR PISTON SUBASSY STOCK STRU FD2020-03-23066 1. DATA ITEM NO. |2. TITLE OF DATA ITEM 3. SUBTITLE 17. PRICE GROUP A001 TEST/INSPECTION REPORTS GOVERNMENT TESTING 4. AUTHORITY (Data Acquisition Document No.) | 5. CONTRACT REFERENCE 6. REQUIRING OFFICE 18. ESTIMATED DI-NDTI-80809B/T OO-ALC/MADLV TOTAL PRICE 9. DIST STATEMENT | 10. FREQUENCY | 12. DATE OF FIRST SUBMISSION 7. DD 250 REO 114. DISTRIBUTION REQUIRED DD OTIME BLK 16 b. COPTES 8. APP CODE 11. AS OF DATE 13. DATE OF SUBSEQUENT SUBM. a. ADDRESSEE -final-N/A draft|reg|repr N/A 16. REMARKS OO-ALC/MADLV 1 (4) Contractor format acceptable. Paragraph 10.2 of DD Form 1664 is 7278 4TH STREET clarified as follows: All dimensions and tolerances specified on the manufacturing data shall BLDG 100, BAY D be listed in one column with the actual corresponding reading obtained from inspection of the part, listed in another column. HILL AFB UT Materials utilized in the manufacture of "First Article" item shall be identified and certified along with a copy of material purchase requests as 84056-5205 conforming to applicable data requirements. Material processes including finish requirements (plating, heat treatment welding inspections, anodize, painting, etc.) utilized in the manufacture of the first article will be identified and certified as conforming to the applicable requirements. A copy of the purchase order certifying the processes accomplished at other than contractor facility shall be included. Other requirements as called out on Engineering Data Requirement (AFLC Form 3720). (9) DISTRIBUTION STATEMENT D: Distribution authorized to the Department of Defense and DOD contractors only (Critical Technology) (15 Sept 95). Other requests for this document shall be referred to OO-ALC/LGHS. (12) Submit concurrently with First Article. FOR DESTINATION

DD Form 1423-1, JUN 90

Ray Brown LGOO Data Mgr.

G. PREPARED BY

Previous editions are obsolete

T. APPROVED BY

Bryan Smith LGOO B

H. DATE

27 JUNE 03

Page / of Pages

DATE

27 JUNE 03

15. TOTAL

### INSTRUCTIONS FOR COMPLETING DD FORM 1423

(See DoD 5010.12M for detailed instructions.)

#### FOR GOVERNMENT PERSONNEL

- Item A. Self-explainatory.
- Item B. Self-explainatory.
- Item C. Mark (X) appropriate category: TDP Technical Data
  Package; TM Technical Manual; Other other category of data,
  such as 'Provisioning', 'Configuration Management', etc.
- Item D. Enter name of system/item being acquired that data will
- Item E. Self-explainatory (to be filled in after contract award).
- Item F. Self-explainatory (to be filled in after contract award).
- Item G. Signature of preparer.
- Item H. Date CDRL was prepared.
- Item I. Signature of CDRL approval authority.
- Item J. Date CDRL was approved.
- Item 1. See DoD FAR Supplement Subpart 4.71 for proper numbering.
- Item 2. Enter title as it appears on data acquisition document cited in Item  $4\,.$
- Item 3. Enter subtitle of data item for futher definition of data item (optional entry).
- Item 4. Enter Data Item Description (DID) number, military specification number, or military standard number listed in DoD 5010.12-L (AMSDL), or one-time DID number, that defines data content and format requirements.
- Item 5. Enter reference to tasking in contract that generates requirement for the data item (e.g. Statement of Work paragraph number).
- Item 6. Enter technical office responsible for ensuring adequacy of the data item.
- Item 7. Specify requirement for inspection/acceptance of the data item by the Government.
- Item 8. Specify requirement for approval of a draft before preparation of the final data item.
- Item 9. For technical data, specify requirement for contractor to mark the appropriate distribution statement on the data (ref DoDD 5230.24).
- Item 10. Specify number of times data items are to be delivered.
- Item 11. Specify as-of date of data item, when applicable.
- Item 12. Specify when first submittal is required.
- Item 13. Specify when subsequent submittals are required, when applicable.
- Item 14. Enter addresses and number of draft/final copies to be delivered to each addressee. Explain reproducible copies in Item 16.
- Item 15. Enter total number of draft/final copies to be delivered.
- Item 16. Use for additional/clarifying information for items 1 through 15. Examples are: Tailoring of documents cited in Item 4; Clarification of submittal dates in Items 12 and 13; Explanation of reproducible copies in Item 14; Desired medium for delivery of the data item.

#### FOR THE CONTRACTOR

- Item 17. Specify appropriate price group from one of the following groups of effort in developing estimated prices for each data item listed on the DD Form 1423.
- a. Group I. Definition Data which is not otherwise essential to the contractor's performance of the primary contracted effort (production, development, testing and administration) but which is required by DD Form 1423.

Estimated Price - Costs to be included under Group I are those applicable to preparing and assembling the data item in conformance with Government requirements, and the administration and other expenses related to reproducing and delivering such data items to the Government.

b. Group II. Definition - Data which is essential to the performance of the primary contracted effort but the contractor is required to perform additional work to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, or quality of the data item.

Estimated Price - Costs to be included under Group II are those incurred over and above the cost of the essential data item without conforming to Government requirements, and the administrative and other expenses related to reproducing and delivering such data item to the Government.

c. Group III. Definition - Data which the contrator must develop for his internal use in performance of the primary contracted effort and does not require any substantial change to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, and quality of the data

Estimated Price - Costs to be included under Group III are the administrative and other expenses related to reproducing and delivering such data item to the Government.

d. Group IV. Definition - Data which is developed by the contractor as part of his normal operating procedures and his effort in supplying these data to the Government is minimal.

Estimated Price - Group IV items should normally be shown on the DD Form 1423 at no cost.

Item 18. For each data item, enter an amount equal to that portion of the total price which is estimated to be attributable to the production or development for the Government of that item of data. These estimated data prices shall be developed only from those costs which will be incurred as a direct result of the requirement to supply data, over and above those costs which would otherwise be incurred in performance of the contract if no data were required. The estimated data prices shall not include any amount for rights in data. The Government's right to use data shall be governed by the pertinent provisions of the contract.

	3. INSTRUCTIONS TO CONTRACTING OFFICER: Insert appropriate clause(s) into Section D for applicable item(s) as indicated below.  AFMCFARS 5352.247-9005, SHIPPING CONTAINER MARKING. ITEM  NAME(s)OR NSN/MMAC	AFMCFARS 5352.247-9006, MARKING OF WARRANTED ITEMS. ITEM NAME(s) OR NSN/MMAC AFMCFARS 5352.247-9007, SPECIFICATION COMMERCIAL PACKAGING (ASTM D3951). ITEM NAME(s) OR NSN/MMAC	AFMCFARS 5352.247-9008, CONTRACTOR COMMERCIAL PACKAGING (Commercial Best Practice). ITEM NAME(s) OR NSN/MMAC	AFMCFARS 5352.247-9009, MILITARY PACKAGING AND MARKING. ITEM NAME(s) OR NSN/MMAC AFMCFARS 5352.247-9010, ENGINEERED OR SPECIALIZED CONTAINERS (CDRS). ITEM NAME(s) OR NSN/MMAC	AFMCFARS 5352.247-9011, PACKAGING AND MARKING OF HAZARDOUS MATERIAL. ITEM NAME(s) OR NSN/MMAC	AFMCFARS 5352.247-9013, PACKAGING DATA (Coded and/or Special Packaging Instructions). ITEM NAME(s) OR NSNAMMAC	UNIT PACK SIZE  UNIT PACK CUBE  O  N  N  N  N  N  N  N  N  N  N  N  N	DATE 3003/7/8 SEE REVERSE SIDE
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	3. INSTRUCTIONS TO CONTRACTING OFFICER: Insert appropriate clause(s) into Section D for applicable item(s) as indicated below.  AFMCFARS 6362.247-9005, SHIPPING CONTAINER MARKING, ITEM  NAME(s)OR NSN/MMAC	AFMCFARS 5352.247-9008, MARKING OF WARRANTED ITEMS. ITEM NAME(s) OR NSN/MMAC AFMCFARS 5352.247-9007, SPECIFICATION COMMERCIAL PACKAGING (ASTM D3951). ITEM NAME(s) OR NSN/MMAC	AFMCFARS 5352.247-9008, CONTRACTOR COMMERCIAL PACKAGING (Commercial Best Practice). ITEM NAME(s) OR NSN/MMAC	AFMICHARS 0302.247-9009, MILITARY PACKAGING AND MARKING. ITEM NAME(s) OR NSN/MAC AFMICHARS 6362.247-9010, ENGINEERED OR SPECIALIZED CONTAINERS (CDRS). ITEM NAME(s) OR NSN/MMAC	AFMCFARS 5352.247-9011, PACKAGING AND MARKING OF HAZARDOUS MATERIAL. ITEM NAME(s) OR NSNAMMAC	AFMCFARS 5352.247-9013, PACKAGING DATA (Coded and/or Special Packaging Instructions). ITEM NAME(s) OR NSN/MMAC	LENGTH   10   WIDTH   10   DEPTH   10   WHOLE CUBE   1000TH   10   10   10   10   10   10   10   1	DATE 3003/7/8 SEE REVERSE SIDE
PACKAGING REQUIREMENTS	1. PACKAGING REQUIREMENTS: Block 1 shall always be completed and further defined in Blocks 2, 3, or 4. The term "Item ID" refers to Military Preservation (PRES) and Packing (PACK). Military packing consists of levels A, B, and Minimum (M). ASTM D3961 could be The reverse side of this form has the European Union environmental requirements.	COMMERCIAL SPECIAL PACKAGING  ITEM ID MIL-STD-2073-1 ASTM D3961 CBP INSTRUCTION  PRES PACK PRES PACK  (#) (X) (A/B/M) (X) (X) (X)  NUMBER	1620 6105 5543	2. ADDITIONAL PACKAGING AND CONTAINER MARKING REQUIREMENTS (Specify all revisions and dates of required specifications,			4. CODED DATA: Coded requirements shall be interpreted in accordance with MIL-STD-2073-1.         ACDED DATA: Coded requirements shall be interpreted in accordance with MIL-STD-2073-1.         ITEM       QUP       ICO       METH       D       MTL       MTL       INT       UNIT       INT       UNIT       V       INT       V       INT       INT       UNIT       INT       UNIT       INT       INT	ORGANIZATION  L G M D L PACKAGING SPECIALIST (Typed Name-Signature)  L G M D L S LEPHUNG  AFMC FORM 158, 20030408 (EF-V1)  PACKAGING SPECIALIST (Typed Name-Signature)  PACKAGING SPECIALIST (Typed Name-Signature)  PACKAGING SPECIALIST (Typed Name-Signature)  PACKAGING SPECIALIST (Typed Name-Signature)

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	3. INSTRUCTIONS TO CONTRACTING OFFICER: Insert appropriate clause(s) into Section D for applicable item(s) as indicated below.	AFMCFARS 5352.247-9005, SHIPPING CONTAINER MARKING. ITEM  NAME(8)OR NSNAMAC  YEAR	AFMCFARS 5352.247-9006, MARKING OF WARRANTED ITEMS. ITEM NAME(s) OR NSN/MMAC. AFMCFARS 5352.247-9007, SPECIFICATION COMMERCIAL PACKAGING (ASTM D3951). ITEM NAME(s) OR NSN/MMAC.	AFMCFARS 5352.247-9008, CONTRACTOR COMMERCIAL PACKAGING (Commercial Best Practice). ITEM NAME(s) OR NSN/MMAC	AFMCFARS 5352.247-9009, MILITARY PACKAGING AND MARKING, ITEM NAME(s) OR NSNAMAC AFMCFARS 5352.247-9010, ENGINEERED OR SPECIALIZED CONTAINERS (CDRS). ITEM NAME(s) OR NSNAMAC	AFMCFARS 5352.247-9011, PACKAGING AND MARKING OF HAZARDOUS MATERIAL, ITEM NAME(s) OR NSN/MMAC	AFMCFARS 5352.247-9013, PACKAGING DATA (Coded and/or Special Packaging Instructions). ITEM NAME(s) OR NSN/MMAC	LENGTH 10 WIDTH 10 DEPTH 10 WHOLE CUBE 1000TH PACK CUBE 1	DATE OATE OATE OATE SEE REVENSE SIDE
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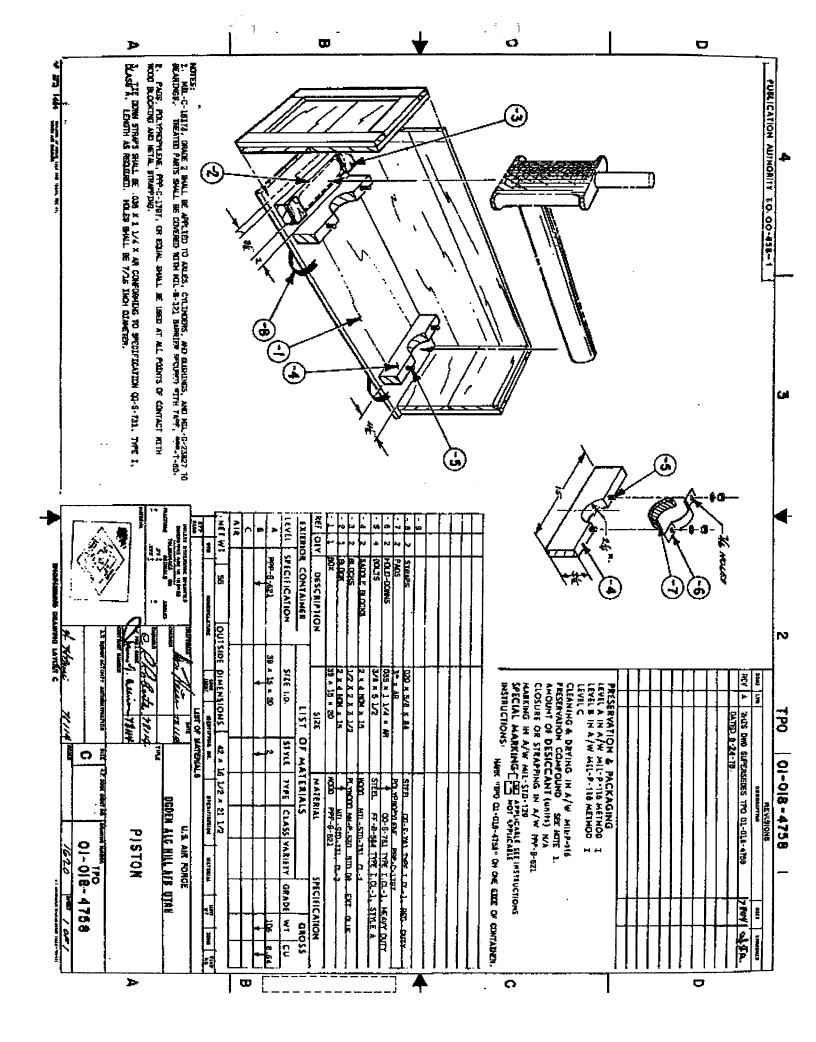
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	3. INSTRUCTIONS TO CONTRACTING OFFICER: Insert appropriate clause(s) into Section D for applicable item(s) as indicated below.  18 to AFMCFARS 535.2.47-9005, SHIPPING CONTAINER MARKING. ITEM ted.	AFMCFARS 5352.247-9008, MARKING OF WARRANTED ITEMS. ITEM NAME(s) OR NSN/MMAC AFMCFARS 5352.247-9007, SPECIFICATION COMMERCIAL PACKAGING (ASTM D3951). ITEM NAME(s) OR NSN/MMAC		AFMCFARS 5352.247-9009, MILITARY PACKAGING AND MARKING. ITEM NAME(s) OR NSNAMMAC AFMCFARS 5352.247-9010, ENGINEERED OR SPECIALIZED CONTAINERS (CDRS). ITEM NAME(s) OR NSNAMMAC	AFMCFARS 5352.247-9011, PACKAGING AND MARKING OF HAZARDOUS MATERIAL. ITEM NAME(s) OR NSNAMMAC	AFMCFARS 5352.247-9013, PACKAGING DATA (Coded and/or Special Packaging Instructions). ITEM NAME(s) OR NSN/MMAC	10 LENGTH 10 WIDTH 10 DEPTH 10 WHOLE CUBE 1000TH 1	DATE 3003/7/9
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PART OR DRAWING NO.	NATIONAL STOCK NO.	CURRENT	ILL. C. CH	ARBONEAU	
18797-1	1620-01-017-6680	REV B	CHK. T. ZIM	IMERMAN	
ITEM NOME	NCLATURE	ORIGINAL DATE	ENGR. M. STE	EPHENS	
CYLINDER ASSEM	MBLY / AC-A10	76170	AUTH, P. FRA	ANCIS	
MILITARY PRESERVATIO	N IAW MIL-STD-2073	PACKING AS	SPECIFIED BELO	W AND BILL OF	MATERIALS
	20	LEVEL SPE	EC STYL	E TYPE CL VRI	TY GR TR
UNSERVICEABLE METHOD: 8	20	A ASTM-		III S	В
QUP 001 ICQ 000		B ASTM-		III 1	A
CLEANING & DRYING: IAW M	TI -CTD-2072	GROSS CU FT		:VEL A LE 8.87	EVEL B 8.87
PRESERVATIVE: MIL-PRF-1	12 010 2070	GROSS WT LBS		93.0	93.0
	•	DESIGN FRAGILIT	TY G	110	110
MARKING IAW MIL-STD	-129		LENGTH	NTDTH .	DEPTH
SPECIAL MARKINGS:		CNTR I.D.	42 1/3	19 1/2	13 1/2
A) SPI NO. F01-017-6680		CNTR O.D.			
*MARK THE SPI NUMBER ON ONE		LEVEL A:	44 3/	4 21 3/4	15 3/4
B) MARK REUSEABLE CONTA		LEVEL B:	44 3/		15 3/4
CLOSURE		ITEM DIM	41	15	5 1/2
LEVEL A: IAW ASTM-D625 LEVEL B: IAW ASTM-D625	•	ITEM WT.	45.0 L	BS.	
LEAFT B: IAM W21W-D052			REVISI	ZNE	
SEE NOTES PAGE 2.		LTR	DESCRIPTI		DATE
SEE NUITS LAGE C.			INTAINER & UPI STATEMENT &		99109
		B ADD WOOD	STATEMENT &	OFDATE	03111

-8	A/R	TAPE	3/4 X A/R	A-A-883 TYPE I DR II	7
- 7	A/R	WRAP	A/R	MIL-PRF-121 GRADE A	
-6	1	SUPPORT, LOWER (SEE DETAIL B)	19 1/2 X 5 3/4 X 1 1/2	ASTM-D4727 CF, DOM, TW, GR 1100	12
-5	1	SUPPORT, UPPER (SEE DETAIL B)	19 1/2 X 7 3/4 X 1 1/2	ASTM-D4727 CF, D□M, TW, GR 1100	Z
- 4	1	SUPPORT, LOWER (SEE DETAIL A)	19 1/2 X 7 1/2 X 1 1/2	ASTM-D4727 CF, DDM, TW, GR 1100	75
- 3	1	SUPPORT, UPPER (SEE DETAIL A)	19 1/2 X 6 X 1 1/2	ASTM-D4727 CF, DOM, TW, GR 1100	
-5	2	END PADS	19 1/2 X 13 1/2 X 1/2 TW	ASTM-D4727 CF. DOM, TW. GR 1100	-
-1	8	INSIDE CLEATS	1 X 3 (NDM) X 13 1/2	ASTM-D6199 CLASS 2	7-
P/N	QTY REQD	NOMENCLATURE DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	6680

SPECIAL PACKAGING INSTRUCTION	CODE ID 98747			(TPI) 868-	
ITEM NOMENCLATURE  CYLINDER ASSEMBLY / AC-A10			2	OF	4

# EUROPEAN UNION (EU) REQUIREMENTS NOTICES

NOTICE 1: LUMBER AND PACKAGING/CONTAINER STATEMENT - "ALL WOODEN LUMBER CONTAINERS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.

NOTICE 2: WOODEN PALLET STATEMENT - "ALL WOODEN PALLETS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.

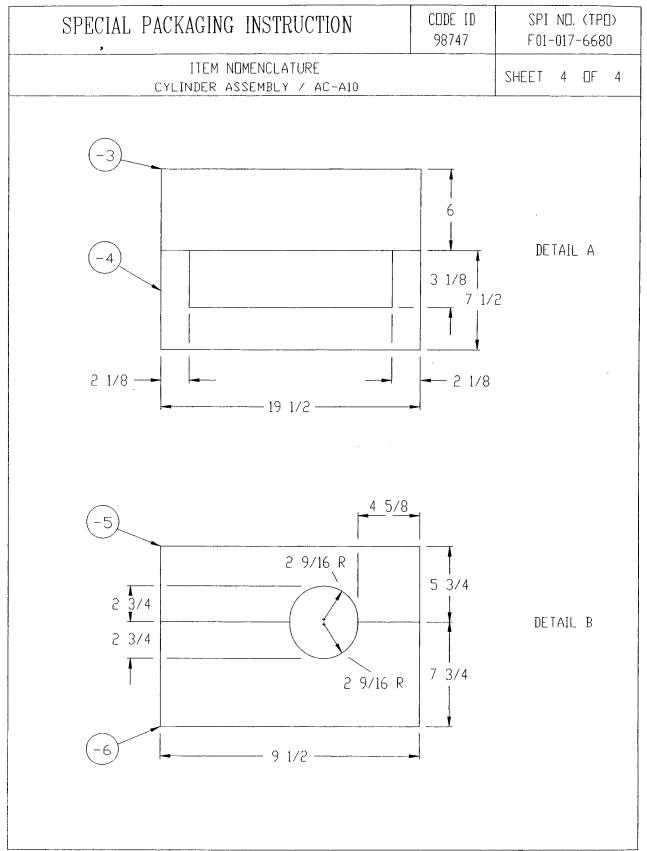
NOTICE 3: HARDWOOD SPECIES STATEMENT - "ALL WOODEN PALLETS PRODUCED ENTIRELY OF NON-MANUFACTURED HARDWOOD SPECIES SHALL BE IDENTIFIED BY A PERMANENT MARKING OF "NC" (NON-CONIFEROUS), 1.25 INCHES OR GREATER IN HEIGHT, ACCOMPANIED BY THE CAGE CODE OF THE CONTRACTED MANUFACTURER AND THE MONTH AND YEAR OF THE CONTRACT. ON PALLETS, THE MARKING SHALL BE APPLIED TO THE STRINGER OR BLOCK ON OPPOSITE SIDES AND ENDS OF THE PALLET AND BE CONTRASTING AND CLEARLY VISIBLE."

### NOTES

- COAT MACHINED SURFACES MADE OF STEEL WITH MIL-PRF-16173, GRADE 2. WRAP ITEM WITH TREF -7. TAPE WRAP IN PLACE WITH REF -8, TAPE AS REQUIRED.
- 2. NAIL CLEATS, REF -1, INTO THE POSITIONS SHOWN IN THE CONTAINER USING ANY SUITABLE NAILS OR STAPLES THAT MEET ASTM-F1667. THE NAILS ARE REQUIRED TO BE DEEP ENDUGH THAT THE CLEATS WILL NOT COME OFF. CLINCHED NAILS ARE THE BEST. INSERT THE END PADS, REF -2, WHERE SHOWN. INSERT LOWER SUPPORTS, REF -4 AND -6 INTO THE SLOTS BETWEEN THE CLEATS AS SHOWN. PLACE THE PRESERVED AND WRAPPED CYLINDER ASSEMBLY INTO THE LOWER SUPPORTS AND SECURE INTO POSITION BY INSERTING UPPER SUPPORTS, REF -3 AND -5. EXTRA END PADS CAN BE USED TO ENSURE THERE IS NO MOVEMENT END TO END OF THE CYLINDER. CLOSE AS REQUIRED.
- 3. ALTERNATE TRIPLE WALL FLUTE DIRECTION ON FIBERBOARD WHEN MAKING SUPPORTS, REF -3, -4, -5 AND -6. THIS GIVES THE SUPPORTS STRENGTH IN BOTH DIRECTIONS.
- 4. ASSETS PACKAGED IN ACCORDANCE WITH PREVIOUS EDITIONS OF THIS SPI DO NOT REQUIRE REPACKAGING, UNLESS THE SPI NO LONGER PROVIDES PROTECTION FOR THE ASSET.

CODE ID SPI NO. (TPO) SPECIAL PACKAGING INSTRUCTION 98747 F01-017-6680 ITEM NOMENCLATURE SHEET 3 OF 4 CYLINDER ASSEMBLY / AC-A10 DETAIL B DETAIL ITEM REFERENCE DETAIL DETAIL 1 5/8 TYP

DD FORM 2169 MOD



		<u> /</u>		
SPECIAL PACKAGING INSTRUCT	ION	CODE ID 98747	00-310	VO. (TPD) 0-9830
			SHEET 1	ØF 3
PART DR DRAWING NO. NATIONAL STOCK NO. 68A450602-1001 1620-00-310-9830	CURRENT REV	ILL. E. HYE		<u> </u>
ITEM NUMENCLATURE CYLINDER, LANDING GEAR	DRIGINAL DATE 88336	CHK, F. LAND ENGR. M. MEDI AUTH. B. EVA	NA MY M	edina ANS
LEVEL A METHOD I LEVEL B METHOD I LEVEL C METHOD I	CKING AS EVEL SPEC A PPP-B-621 B PPP-B-621 C PPP-B-621 GRUSS CU F GRUSS VT L DESIGN FRAC CNTR LD. LTEM DIM LTEM VT LB:	(MOD) 4 (MOD) 4 (MOD) 4 LEVEL T 6.087 BS 67 SILITY G 110 LENGTH 39 1/2 42 1/2 36 1/2 S 26	TYPE CL 2 1 1 6.087 67 110 VIDTH 19 1/8 20 5/8 15 1/4	VRTY GR A B B
	LTR	DESCRIPTION		TE APRVD

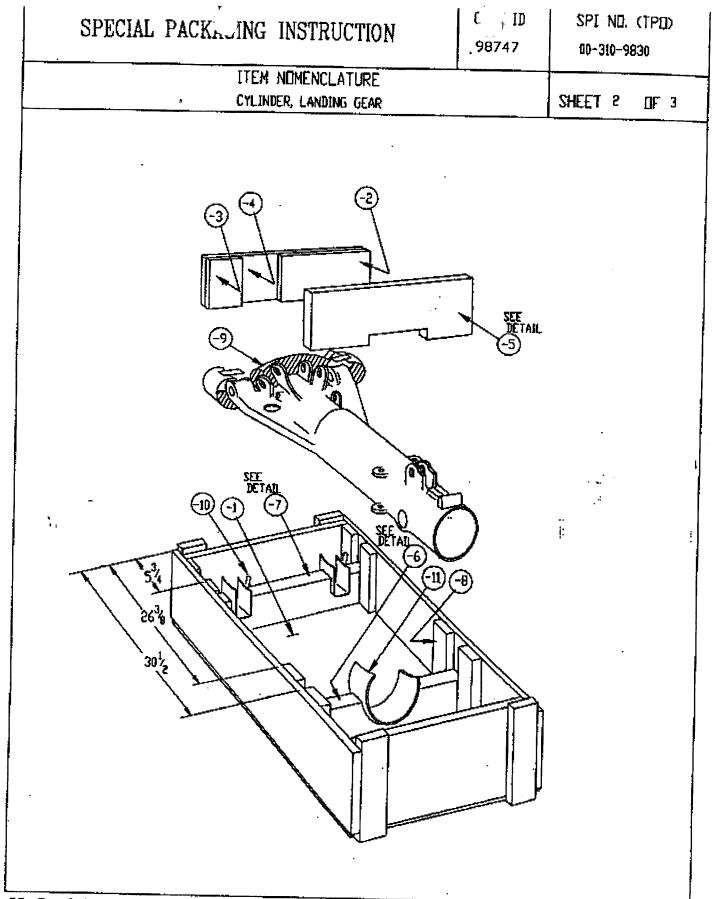
CLOSURE IN ACCORDANCE WITH PPP-8-621

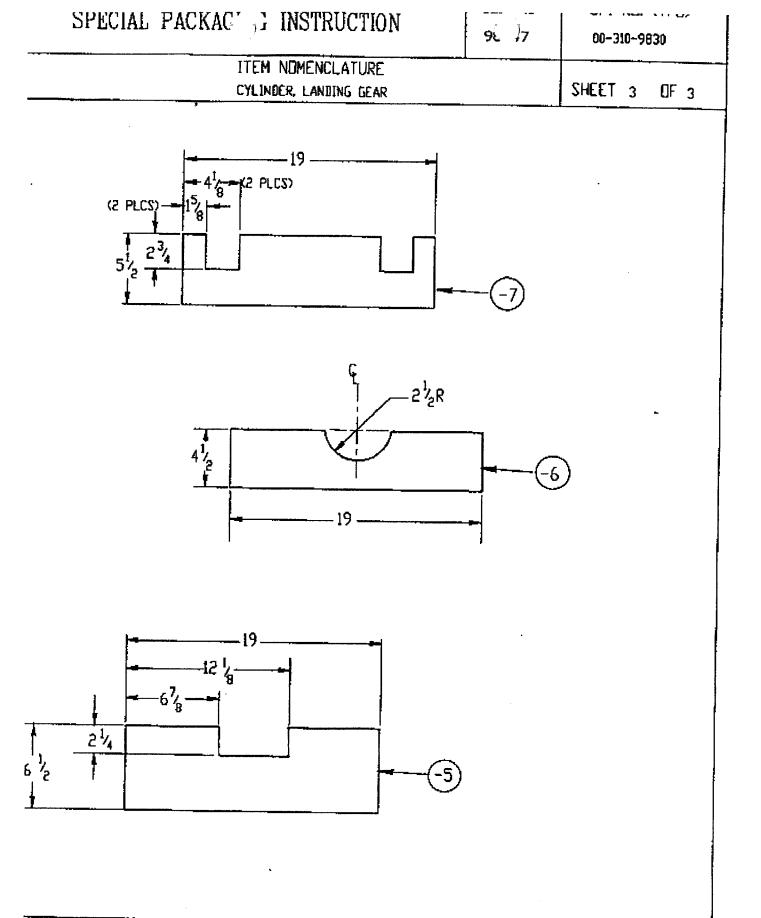
## NOTES:

- 1. PRESERVE ERITICAL AREAS AND WRAP WITH -9 USING -10 TO SECURE WRAP.
- 2. SECURE -8 TO CONTAINER AND -2 L -3 TO -4 USING 4d NAILS CONFORMING TO FF-N-105, TYPE II, STYLE 4A DR EQUAL.

1	7-2-	I Division in the same			- F
-11		CHAFFING STRIP	AS REQUIRED X 3 X 1/2	IPPP-P-115 TYPE FOR EQUAL	
		NYLON TAPE	AS REQUIRED X 1/2	PPP-T-97 TYPE []]	#
-9		VRAP	AS REQUIRED	MIL-B-121 TYPE L GR A. CL 2	
-8	8	SADDLE BRACES	1 X 3(NOM) X H	MIL-STD-731 CLASS 2	
-7		SAUDLE	2 X 6(NON) X 19	MUL-SID-731 CLASS 2	
-6		SADDLE	19 X 4 1/2 X 1 1/2	MIL-STD-731 CLASS 2	\rightarrow \frac{1}{2}
-5	1	SADDLE	19 x 6 1/2 x 1 1/2	MIL-STD-731 CLASS 2	
-4	11	SADDLE	19 X 5 1/2 X 3/4	NN-P-530 GROUP B	
-3	11_	SADDLE SUPPORT	5 1/2 X 4 1/2 X 3/4	NN-P-530 GROUP B	
-2	1	SADDLE SUPPORT	9 X 5 1/2 X 3/4	NN-P-530 GROUP B	
<u>-1</u>	5	TOP & BOTTOM	4L X 20 5/8 X 1/2	NN-P-530 GROUP B	
P/N	OTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	

DD 45 2169 MOD





SPECIAL PACKAGING INSTRUCTION			98747		10. (TPO) 13-2153 DF 3
PART OR DRAWING NO.	NATIONAL STOCK NO.	CURRENT REV	ILL. E. NYE		
684452602-1001	1620-01-233-2153			3.2 W	•
ITEM NOME	NCLATURE	DRIGINAL	CHK. S. MEIEI ENGR. M. MEDI	NA CON PA	المواجد
CYLINDER A		DATE 89129	AUTH. B. EVAI		ano
PRESERVATION (AV MIL	-P-116 PAC	CKING AS	SPECIFIED BELO	IV AND BILL	OF MATERIALS
LEVEL A METHOD I	LE	EVEL SPEC		TYPE CL	VRTY GR
LEVEL B METHOD I		A PPP-B-621		2	A
LEVEL C METHOD 1 QUP DOL		B PPP-B-621		1	В
1CQ 000		C PPP-B-621		1	]
CLEANING METHOD C-1		רוו די	LEVEL	., 44, 66	1
DRYING METHOD D-I		GROSS CUF		6,087 80	6.087 80
PRESERVATIVE MIL-G-813	22 OR EQUAL	DESIGN FRAC		110	110
MARKING IAV HIL-STD-LE	29		LENGTH	VIOTH	DEPTH
SPECIAL MARKINGS:	All Buch Service	CNTR 1.D.	39 1/2	19 1/8	ų.
A) SPI NO. 01-233-2153	MARK THE SPE	CNTR Q.D.	42 1/2	20 5/8	IS
NUMBER ON ONE SIDE OF THE ON ALL REMOVABLE DUNNAC	GE.	ITEM DIM	36 1/2 5 37	15 1/4	9
			BEL ITE		***

	REVISIONS						
LJR	DESCRIPTION	DATE	APRVD				
<u> </u>							
	***************************************						
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CLOSURE IN ACCORDANCE WITH PPP-B-621

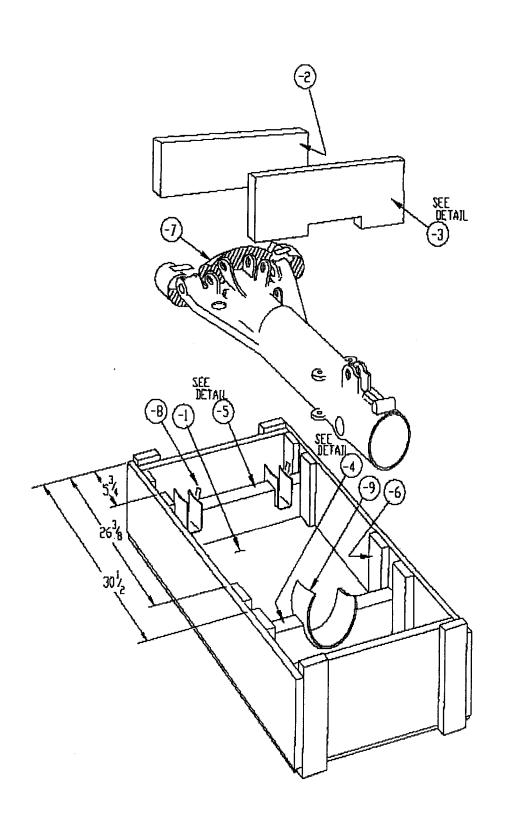
# NOTES:

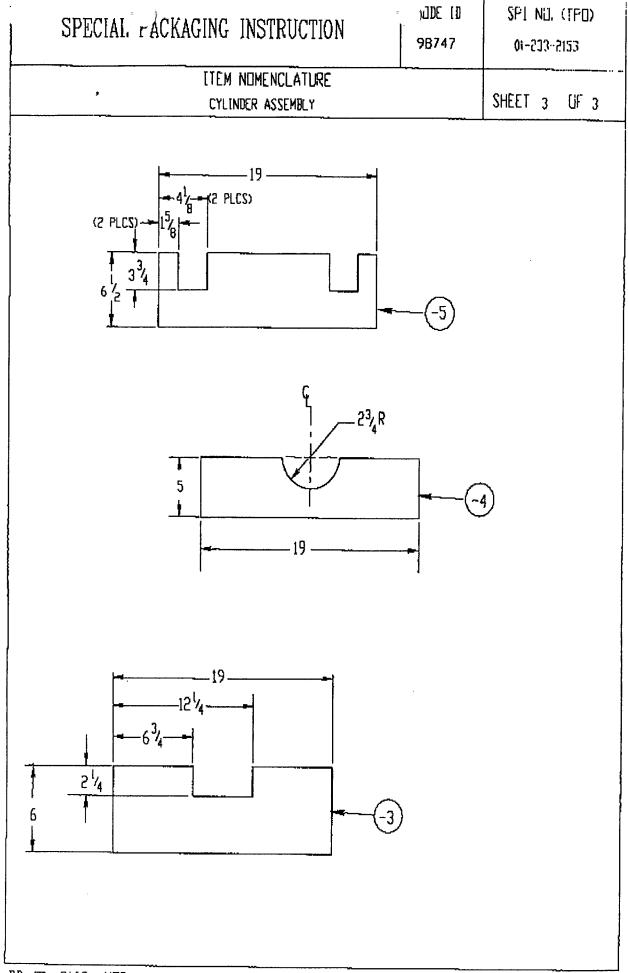
- 1. PRESERVE CRITICAL AREAS AND WRAP WITH -8 USING -9 TO SECURE WRAP.
- 2. SECURE -6 TO CONTAINER USING 4d NAILS CONFORMING TO FF-N-105, TYPE II, STYLE 4A OR EQUAL.

					į
-9		CHAFFING STRIP	AS REQUIRED X 3 X 1/2	PPP-P-115 TYPE I OR EQUAL	-
-8		NYLON TAPE	AS REQUIRED X 1/2	PPP-T-97 TYPE [[]	٦,
[-7	A/R	VRAP	AS REQUIRED	MIL-B-121 TYPE I, GR A, CL 2	٦,
-6		SADDLE BRACES	1 X 3(NDM) X 11	MIL-STD-731 CLASS Z	بزاح
-5		SADDLE	19 X 6 1/2 X 1 1/2	MIL-STD-731 CLASS 2	٦,
-4		SADDLE	19 X 5 X 1 1/2	MIL-STD-731 CLASS 2	45
-3	<del></del>	SADDLE	19 X 6 X 1 1/2	MIL-STD-731 CLASS 2	⊣ნ
-5		SUPPERT	19 X 4 1/4 X 1 1/2	MIL-STD-731 CLASS 2	┿
-1	2	TOP & BOTTOM	41 X 20 5/8 X 1/2	NN-P-530 GROUP B	
P/N	DTY REOD	NOMENCLATURE DR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	

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SPECIAL PACKAGING INSTRUCTION	98747	SP[ ND. (TPD) 01-233-2153
, ITEM NOMENCLATURE CYLINDER ASSEMBLY		SHEET 5 OF 3





		J		
	= J		LUE ID	SPI NO. (TPO)
SPECIAL PACI	KAGING INSTRUCT	ION	98747	01-235-2927
				SHEET 1 OF 3
PART OR DRAWING NO.	NATIONAL STOCK NO.	CURRENT	ILL. E. NYE	
68A412702-1001	1620-01-235-2927	REV		
L		ORIGINAL	CHK. S. MEIE	
ITEM NOMEN		DATE	ENGR. V. ELI	1
CYLINDER, MA	IN LANDING	88060	AUTH. B. EVA	11/1/2
PRESERVATION IAW MIL-	-P-116 PAC	CKING AS		OW AND BILL OF MATERIALS
LEVEL A METHOD I	LE	EVEL SPEC		TYPE CL VRTY GR
LEVEL B METHOD I		A MIL-B-26195		II 1
QUP 001		B MIL-B-26195 C MIL-B-26195		I I
ICQ 000		o the bleath	LEVE	_ A LEVEL B LEVEL C
CLEANING C-1		GROSS CU F		
DRYING D-1 PRESERVATIVE MIL-G-8132	22	GROSS WT L		120 120
MARKING IAW MIL-STD-129		DESIGN FRA	GILITY G 110 LENGTH	110 110 WIDTH DEPTH
SPECIAL MARKINGS:	/	CNTR I.D.	29	25 15
A) SPI NO. 01-235-2927	MARK THE SPI	CNTR D.D.	31	27 20
NUMBER ON ONE SIDE OF TH		ITEM DIM	24 3/4	21 9
ON ALL REMOVABLE DUNNAGI		ITEM WT LB	S 64	
B) CAUTION: LIFT BY BASE				SIONS
C) TO OPEN REMOVE BOTTO	M LAG BULIS	LTR	DESCRIPTION	DATE APRVD
CLOSURE IN ACCORDANCE W	/ITH MIL-B-26195			
-18 16 CORNER STRAPS	1.028 X 3/4 X 12	QQ-S-7	1 22A I) 18	TYPE II, FIN A
-17 12 WASHERS	1/4 DIA	FF-W-9		
-16 12 LAG BOLTS	1/4 X 2 1/2	FF-B-5		STYLE 1, GR B
-15 1 STRAPPING		QQ-S-7		TYPE I, HVY DUTY, FIN A
-14 1 STRAPPING -13 A/R NYLON TAPE	.035 X 1 1/4 X 15 AS REQUIRED X 3/4	QQ-S-7   PPP-T-		TYPE I, HVY DUTY, FIN A
-12 1 WRAP	AS REQUIRED	MIL-B-		RADE A, CLASS 2
-11 3 CHAFFING STRIPS	AS REQUIRED X 3 X	1/4 PPP-P-	115 TYPE I D	IR EQUAL
-10 9 NUTS	3/8 DIA	FF-N-8		STILE 4 (MEX)
-9 9 WASHERS -8 5 TORQUE WASHERS	3/8 DIA TO FIT 3/8 BDLT	FF-W- MS-983		GRADE I, CLASS A
-7 4 BOLTS	3/8 X 6	FF-B-		CLASS I, STYLE A
-6 5 BOLTS	3/8 X 5	FF-B-5	84 TYPE I,	CLASS I, STYLE A CLASS I, STYLE A
-5 I BASE	29 X 25 X 1/2	NN-P-5		70
-4 1 SADDLE	2 X 4(NOM) X 25	MIL-ST	D-731 CLASS 2	

MIL-STD-731

MIL-STD-731

MIL-STD-731

5 X S(NOW) X 58

4 X 4(NOM) X 27

2 X 4(NOM) X 13 1/2

SIZE

(INCHES UNLESS SPECIFIED)

CLASS 2

CLASS 2

CLASS 2

MATERIAL SPECIFICATION

QTY

REQD

SADDLE

HEADERS

NOMENCLATURE OR

DESCRIPTION

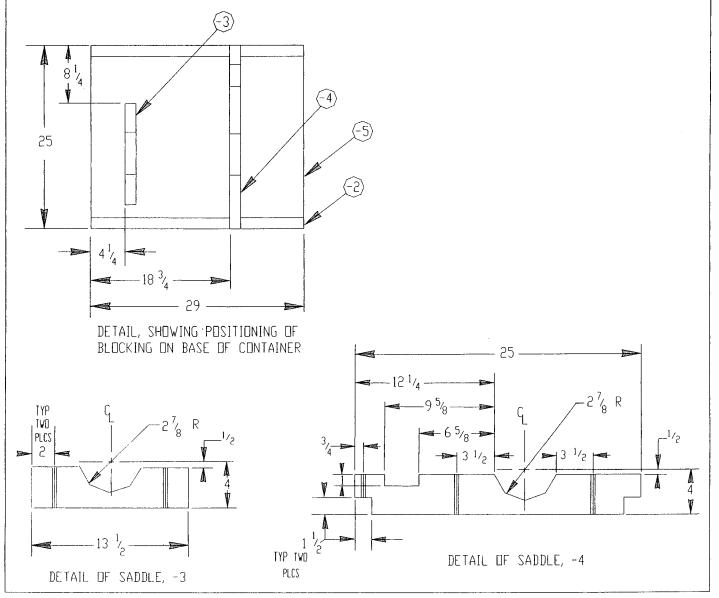
SKIDS

SPECIAL PACKAGING INSTRUCTION	ĴE ID 98747	SPI NO. (TPO) 01-235-2927
, ITEM NOMENCLATURE CYLINDER, MAIN LANDING		SHEET 2 OF 3
-15 -18 -19 -10 -10 -10 -10 -10 -10 -10 -10		(-12) (-13) (-10) (-9) (-7)

SPECIAL PACKAGING INSTRUCTION	98747	SPI NO. (TPO) 01-235-2927
, ITEM NOMENCLATURE		SHEET 3 OF 3

### NOTES:

- 1. SOURCE OF SUPPLY FOR TORQUE WASHERS, CATALOG NO. MS-98398: CARR FASTENER CO. 31 AMES ST CAMBRIDGE MASS. 02142
- 2. UNLESS OTHERWISE SPECIFIED, DIMENSIONS WILL BE IN INCHES. TOLERANCES: ± 1/16
- 3. PRESERVE CRITICAL AREAS WITH MIL-G-81322 DR EQUAL. WRAP WITH -12 USING -13 AS REQUIRED TO SECURE WRAP.
- 4. CHAFFING STRIP, -11, SHALL BE USED AT ALL POINTS WHERE ITEM CONTACTS WOOD BLOCKING AND METAL STRAPPING. CHAFFING STRIPS SHALL BE HELD IN PLACE WITH STAPLES, FF-N-105, TYPE III, STYLE 3. SIZE OF STAPLES SHALL BE: 1/2" CROWN, 14 GAGE, 1/2" LENGTH.
- 5. USE -18, CORNER STRAPPING ON LEVEL A PACK DNLY.
- 6. JOISTS WILL BE PROVIDED IN SUPERSTRUCTURE IN ACCORDANCE WITH MIL-B-26195.



SPECIAL, PACKAGING INSTRUCTION			C0D0 98	747	F01 SHEE	-232 T 1	(TPD -9310 DF	1			
PA			ONAL STOCK NO. 520-01-232-9310	CURRE RE V A		ILL. CHK.		RBONEAU MERMAN			
		ITEM NOMENCLA	TURE	DRIGI		ENGR.	M. STE	PHENS			
	TZI	ON ASSEMBLY, NOSE LA	NDING GEAR F-15	DATI 8913	- 1	AUTH.	P. FRA	NCIS			
		RY PRESERVATION IAW	·········	PACKING					I DE	MATER	21415
3	SERVI JNSER	CEABLE METHOD: 20 VICEABLE METHOD: 20		LEVEL A	SPE I-MTRA	C 06256	STYLE A	E TYPE C	L VR1		TR B
1	QUP ( CQ (			В	ASTM-D	16256	Α	1 1		,	А
(	CLEAN PRESE	ING & DRYING: IAW MIL-STD RVATIVE: MIL-C-16173, GR NG IAW MIL-STD-129	ADE 2	GROSS CU GROSS WI DESIGN F	T LBS	- -Y G	8	VEL A .726 118 110		VEL 1 8.726 118 110	В
i							LENGTH	WID	TH	DEP	TH
		AL MARKINGS:		CNTR I.D.			54 1/2	15	1/2	11	
ļ <sup>6</sup>		I NO. F01-232-9310 RK THE SP1 NUMBER ON ONE SIDE OF D ALL REMOVABLE DUNNAGE.	THE CONTAINER	CNTR D.D.							
	AN	D ALL REMOVABLE DUNNAGE.		LEVEL			56 1/2	17	1/2	15 1	/4
CL		RE		LEVEL	В:		56 1/2			15 1	i
		A: IAW ASTM-D6256		ITEM DIM			49	10	1/2	9	
L	.EVEL	B: IAW ASTM-D6256		ITEM WT.			52 LB	S.			
SE	E N	otes page 2.					REVISIO	NS			
				LTR	) (MM)		SCRIPTIO		5500		DATE
				A ADD	MUUD	STATEM	ENI & L	IPDATE S	PECS	. 0:	3133
-15	10	NUTS	3/8	F	F-N-83	6 TYP	E II, ST	YIF A			
		WASHERS	1/4					DE I, CL	ASS A	4	
-13	10	WASHERS	3/8	FI	F-W-98	2 TYPE	A, GRA	DE I, CL			
-12	4	TORQUE WASHERS .	TO FIT 3/8 BOLT	~~~			36-9532				
-11 -10	18 4	LAG BOLTS BOLTS	2 1/2 X 1/4 6 1/2 X 3/8				2.1, B18.1 5, B18.9,				
-9	6	BOLTS	6 X 3/8					B18.18.1			
-8	1	FIBERBOARD PAD	12 3/8 X 10 X 3/16					GRADE 20	0		
- 7	1	SUPPORT	12 3/8 X 10 X 1/2	1	-A-550		YPE A				
-6	1	BASE	54 1/2 X 15 1/2 X 1		-A-550		YPE A				
-5 -4	1	BRACE SADDLE	2 X 4 (NOM) X 12 3. 2 X 4 1/2 (ACT) X 1		STM-D6 STM-D6			CLASS 2			——  <u>ē</u>
-3	1	SADDLE	2 X 4 1/2 (ACT) X 1	1				CLASS 2			1
-2		HEADERS	2 X 2 (NDM) X 54 1.		STM-D6			CLASS 2			
-1	3	SKIDS	3 X 4 (NDM) X 17 1/				<b></b>	CLASS 2			
P/N	QTY REQD	NOMENCLATURE DESCRIPTION	SIZE (INCHES UNLESS SPEC			**********		PECIFICA			, of Fac /ato

SPECIAL PACKAGING INSTRUCTION	CODE ID 98747	SPI N F01-2			I
ITEM NOMENCLATURE			2	ОГ	
PISTON ASSEMBLY, NOSE LANDING GEAR F-15			2	OF	4

# EUROPEAN UNION (EU) REQUIREMENTS NOTICES

NOTICE 1: LUMBER AND PACKAGING/CONTAINER STATEMENT - "ALL WOODEN LUMBER CONTAINERS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.

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### NOTES

- 1. PRESERVE CRITICAL AREAS WITH MIL-C-16173, GRADE 2 AND WRAP WITH REF -17. SECURE WRAP WITH REF -19 AS REQUIRED.
- 2. CHAFFING STRIP, REF -16, DR CUSHIDNING, REF -18, SHALL BE USED AT ALL POINTS WHERE ITEM WOULD CONTACT WOOD BLOCKING AND METAL STRAPPING. SECURE CHAFFING STRIP TO SADDLES USING STAPLES CONFORMING TO FF-N-105, TYPE III, STYLE 3, 1/2 INCH CROWN, 14 GAGE, 1/2 INCH LENGTH DR EQUAL.
- 3. POSITION REF -8 ON TOP OF REF -7 AND REF -5 ON TOP OF REF -8. ATTACH ALL THREE TO REF -6 AND END SKID USING 10d NAILS CONFORMING TO FF-N-105, TYPE 11, STYLE 4A OR EQUAL.
- 4. APPLY CORNER STRAPS, REF -21, TO LEVEL A PACK ONLY, USING 3d NAILS CONFORMING TO FF-N-105, TYPE II, STYLE 7.

-21	16	CORNER STRAPS	.028 X 3/4 X 12	ASTM-D3953 TYPE 2, FINISH A		
-20	5	STRAPPING	.035 X 1 1/4 X 12	ASTM-D3953 TYPE 1, REG DUTY, FIN A		
-19	A/R	TAPE	A/R X 1/2	ASTM-D5330 TYPE IV		
-18	1	CUSHION WRAP	24 X 10 X 1/8	PPP-C-1797 TYPE I		
-17	1	WRAP	36 X 13 1/2	MIL-PRF-121 TYPE I, GRADE A, CLASS 2		
-16	2	CHAFFING STRIP	15 X 3 X 1/4	PPP-P-115 TYPE I OR EQUAL		
P/N		NOMENCLATURE	SIZE	MATERIAL SPECIFICATION		
	REQD	DESCRIPTION	(INCHES UNLESS SPECIFIED)			

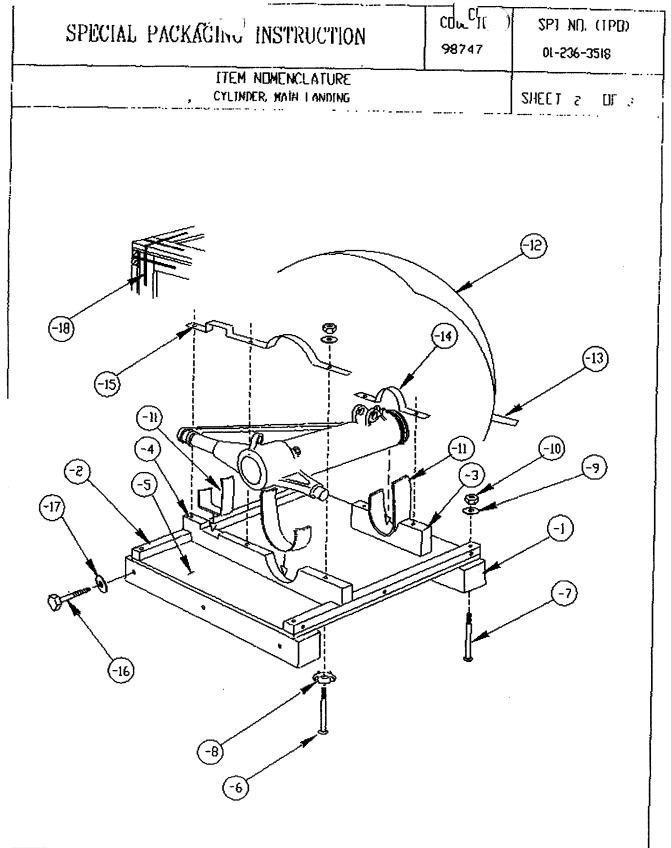
SPECIAL PACKAGING INSTRUCTION	CODE ID 98747	SPI NO. (TPO) F01-232-9310
ITEM NOMENCLATURE  PISTON ASSEMBLY, NOSE LANDING GEAR F-15		SHEET 3 OF 4
-19 -19 -19 -19 -19 -19 -19 -19 -19 -19	-16) -10)	-20 -17 -16 SEE DETAIL -13 -2 -11 -14 -9

DD FORM 2169 MOD

CODE ID SPI NO. (TPO) SPECIAL PACKAGING INSTRUCTION F01-232-9310 98747 ITEM NOMENCLATURE SHEET 4 OF 4 PISTON ASSEMBLY, NOSE LANDING GEAR F-15 2 RAD. 4½ TYP 2 PLCS 2 PLCS - 15%

_	<del></del>	<del></del>						
		· )		CODE SPENO. (TPD			TP(I)	$\Box$
-	SPECIAL PACKAC	HING INSTRUCT	98747	e e	-236-35			
				90/4/	SHEET	1 0	F 3	亅
Ĺ	PART OR DRAWING NO.   NAT	TONAL STOCK NO.	CURRENT	ILL. E. KYE				-{
ĺ	i	9-01-236-3518	REV	I				•
_			ORIGINAL	CHK. S. METEI	5 ~ ; . j	ر دا د هېدفيمت اماد	. ,	İ
			DATE	ENGR. V. ELIZONDO 2/ Emigrado			ł	
_			88067	AUTH, B. EVA	NS ZS	Econor	· /*	
۲	PRESERVATION IAW MIL-P-110		KING AS	SPECIFIED BELO			JA18RIAL	s
	LEVEL A METHOD [	==	VEL SPEC		YPE ÇL	VRT	Y GR	-
	LEVEL C METHOD (			_~8-26195(MDB) A				
	00P 001		MIL-B-26195	KMOD) A	į			ĺ
	ICD 000 CLEANING C-1				A LEVI		EVEL C	١
1	DRYING D-1		GROSS CU F		9.6		.688	1
	PRESERVATIVE MIL-G-81322		GROSS VI L	BS 120 DL(TY G 110	16	-	150	
H	IARK[NG IAV MIL-STD-129		DC3700 1 1010	LENGTH	j) Hidiw	-	110 PTH	
	SPECIAL MARKINGS:		CNIR I.D.	29	25	3		ł
	A) SPI NO. 01-236-3518 MAI NUMBER ON DINE SIDE OF THE COM	RK THE SP(	CNTR (J.)).	31	27	2	Q	١
	ON ALL REMOVABLE DUNNAGE.	OWINCK HAU	JIEM D(M JIEM VI LBS	24 3/4 5 64	ટા	9	!	
	B) CAUTION: LIFT BY BASE ONLY	<i>!</i>	7.2 #1 20.		<del></del>		<u> </u>	1
	C) TO OPEN REMOVE BOTTOM LA	6 88LTS	LTR	REVIS DESCRIPTION	IUNS	DATE	TABOL A	4
				SC SCRIFTION		DATE	APRVI	1
					<del></del> -		<del> </del>	1
								1
			f			<u> </u>	<b></b>	1
CI	I JUST IN ACCOUNT OF THE PARTY				<u>~</u>	<del></del>	L	┨
υι	LOSURE IN ACCORDANCE WITH A	ILC-11-26195						l
								Ì
<b>.</b>								
	9 16 CORNER STRAPS	.028 X 3/4 X 12	00-5-78					
-16 -16	7 12 VASUERS 6 12 LAG BOLTS	1/4 DIA 1/4 X 2 1/2	FF-V-92		ADE I. C	LASS A		
- <u>15</u>	5 1 STRAPPING	.035 X ] 1/4 X 29	<u>FF-8-56</u> QQ-3-78					
-{4	¢[ L   STRAPPING	.035 X 1 1/4 X 15	QQ-5-76		YPF 1 HV	Y DUTY	FIN Δ	
<u>-13</u>	A/R NYCON TAPE	AS REQUIRED X 3/4	PPP-T-9	7 TYPE [[]				ł
-11 -12	2 1 WRAP 3 CHAFFING STRIPS	AS REQUIRED X 3 X 1	M(L-B-12		DE A CI	-ASS 2	·	<u> </u>
-10	STURN E	3/8 DIA	/4 PPP-P-U		EQUAL TYLE 4 (	HEY)		Ę
8	9 WASHERS	3/8 DIA	<u> </u> F₹-₩-9;	YPE A, G	PADE I. C	LAZZ A		2
·8 ·7	5 TORQUE WASHERS 1 4 BOLTS	TO FIT 3/8 BOLT	MS-9839	<u>8 SEE NOTE</u>	1			מי באם כאבי
6		3/8 X 6 3/8 X 5	FF-B-58		<u> </u>	IYLE A		۲
5	I BASE	29 x 25 x 1/2	NN-P-53		427 T-7	IIIL B		יי א
		2 X 4(NOH) X 25	MIL-STD-	-731 CLASS 2				'-
3	L SADDLE 2 HEADERS	2 X 4(NDH) X 13 1/2	WIT-ZID-	-731 CLASS 2				۱
<u>ر</u> ا	2 SKIDS	2 X 2(NDM) X 29 4 X 4(NDM) X 27	M(L-SID)	-731 CLASS 2 -731 CLASS 2				
	GTV MONCHAS ATHOR OO	~~~~~~	INIT-SID.		F104 F15			
M	REOD DESCRIPTION	SIZE CINCHES UNLESS SPECIF	rem	MATERIAL SPEC	IF EUATION	l		
		The second contracts of Coll	** 02	•				

DD "18" S169 MDD



D 2169c MOD

### COL SPI NO. (TPO) SPECIAL PACKAGING INSTRUCTION 98747 01-236-3518 ITÉM NOMENCLATURE SHEET 3 OF 3

CYLINDER, MAIN LANDING

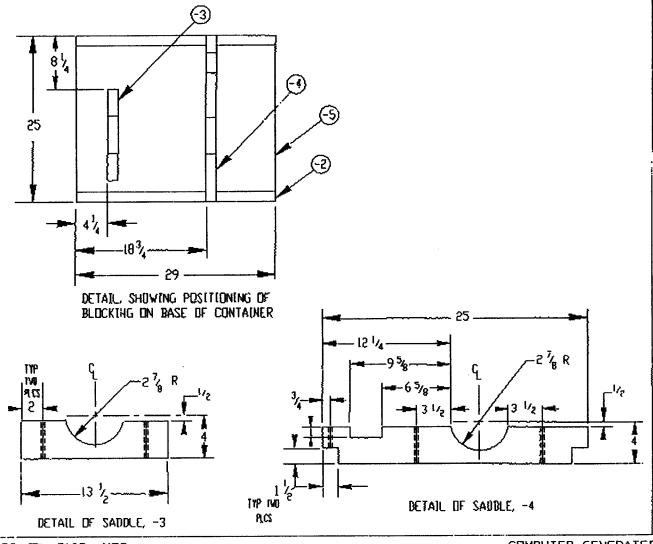
## NOTES:

I. SOURCE OF SUPPLY FOR TORQUE WASHERS, CATALOG NO. MS-98398: CARR FASTENER CO. 31 AMES ST CAMBRIDGE MASS. 02142

S. LINLESS OTHERWISE SPECIFIED, DIMENSIONS WILL BE IN INCHES. TOLERANCES: ± 1/16

3. PRESERVE CRITICAL AREAS VITH MIL-G-81322 OR EQUAL. WRAP WITH -12 USING -13 AS REDUIRED TO SECURE WRAP.

- 4. CHAFFING STRIP, -]I, SHALL BE USED AT ALL POINTS WHERE ITEM CONTACTS VOIDD BLOCKING AND METAL STRAPPING. CHAFFING STRIPS SHALL BE HELD IN PLACE WITH STAPLES, FF-N-105, TYPE 111, STYLE 3. SIZE OF STAPLES SHALL BE: 1/2' CROWN 14 GAGE, 1/2" LENGTH.
- 5. USE -18, CORNER STRAPPING ON LEVEL A PACK DNLY.
- 6. JUISTS WILL BE PROVIDED IN SUPERSTRUCTURE IN ACCORDANCE WITH MIL-8-26195.



DD 488 2169c MOD

SPECIAL PACKAGING INSTRUCT	TION	CODE ID 98747	SPI NO. F01-07 SHEET 1	1-0534
PART OR DRAWING NO. NATIONAL STOCK NO. 2006644-103 1620-01-071-0534	CURRENT REV	ILL. P. ELLI		
ITEM N□MENCLATURE  PISTON, LANDING GEAR	ORIGINAL DATE 99088	CHK. S. EDW ENGR. K.W. OL AUTH. A. BRIM	SON	
MILITARY PRESERVATION IAW: MIL-STD-2073 SERVICEABLE METHOD: 20	LEVEL SPI	EC STYL		VRTY GR
UNSERVICEABLE METHOD: 20  QUP 001		PP-B-621 4 STM-D5118 RSC	A 157/51 D	A W5C
ICQ 000  CLEANING & DRYING IAW: MIL-STD-2073  PRESERVATIVE MIL-PRF-16173,GRADE 2, CDDE 02	GROSS CU F GROSS <b>V</b> T L	LBS 30	1.27 23	
MARKING IAW MIL-STD-129  SPECIAL MARKINGS:	DESIGN FRA	GILITY G 100 LENG 24	100 TH WIDTH 12	DEPTH 6 1/2
A) SPI NO. F01-071-0534 *MARK THE SPI NUMBER ON THE ONE SIDE OF THE CONTAINER MARK REUSABLE CONTAINER DO NOT DESTROY	CNTR D.D. LEVEL A: LEVEL B:	28 24	14 3/8 12 3/8	8 1/2 7 1/4
CLOSURE	ITEM DIM ITEM WT LB	19 1 3S 20	/4 9 3/4	4 1/2
LEVEL A: IAW: PPP-B-621 LEVEL B: IAW: ASTM-D1974 CAUTION NOTICE	LTR	REVI: DESCRIPTION	SIONS	DATE
1 THIS PISTON HAS A HISTORY OF CORROSION. INSURE THE PRESERVATIVE IS APPLIED AS				

## NOTES

INSTRUCTED IN NOTE 1.

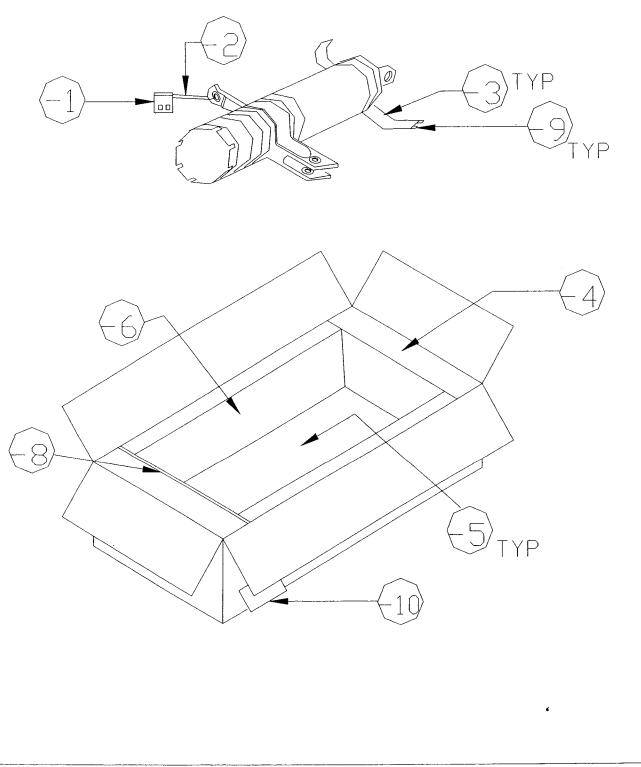
STRING OR SIMILAR METHOD.

2 GREASE SERTS ARE TO BE REMOVED, PLACED IN A POLY BAG AND ATTACHED TO AN AREA THAT WILL NOT CAUSE CORROSION WITH THE USE OF A

- I APPLY MIL-C-16173, GRADE 2 PRESERVATIVE ON ALL BARE METAL SURFACES, INCLUDING INSIDE THE HOLLOW TUBE OF THE PISTON LANDING GEAR. INSURE ALL SURFACES ARE COMPLETELY COVERED. WRAP PRESERVED EXPOSED SURFACES WITH -3 WRAP AND SECURE IN PLACE WITH A-A-883 TAPE -9 OR EQUAL.
- 2 WRAP AND CUSHION PISTON WITH MICROFOAM -7 AND FILL ALL VOIDS SO ITEM IS PACKED VERY SNUG.

					] -
-10	A/R	TAPE	A/R X 3	ASTM-D5486 OR EQUAL	į
-9	A/R	TAPE	A/R X 1	A-A-883 TYPE I OR TYPE II	5
-8	1	PLATTEN	12 X 6 1/2 X 1/8	ASTM-D4727 CF, DOM, SW, GR 200	<
- 7	.A/R	CUSHIONING	A/R	PPP-C-1797 TYPE 1	5
-6	2	SIDE PADS	19 1/2 X 4 1/2 X 1	A-A-59135 CLASS I. GRADE A	13
-5	2	TOP & BOTTOM PADS	19 1/2 X 12 X 1	A-A-59135 CLASS I GRADE A	
-4	5	END PADS	12 X 6 1/2 X 2	A-A-59135 CLASS I, GRADE A	-
-3	A/R	WRAP	A/R	MII -PRE-121 IY I, GR. A, H.D.	L
-5	1	STRING	A/R	ANY SUTIABLE VARITY	1
-1	1	POLY BAG	4 X 4 X A/R	L-P-378 TYPE I, CL I, GR. A , FIN. I	-
P/N	QTY	NDMENCLATURE	SIZE	MATERIAL SPECIFICATION	
1''	REQD	DESCRIPTION	(INCHES UNLESS SPECIFIED)	REVISIONS	

SPECIAL PACKAGING INSTRUCTION	CODE ID 98747	SPI NO. (TPO) F01-071-0534	
ITEM NOMENCLATURE PISTON, LANDING GEAR	- · - · · · · · · · · · · · · · · · · ·		



PRESERVATION JAV MIL-P-116 LEVEL A METHOD I LEVEL B METHOD I LEVEL C METHOD ) CREPARABLESS DUP 001 100 000 CLEANING C-1 DRYING Ð-1 PRESERVATIVE MIL-G-81322 MARKING JAV MIL-STD-129 SPECIAL MARKINGS: A) SPI NO. 01-253-1350 HARK THE SPE NUMBER ON ONE STOE OF THE CONTAINER AND ON ALL REMOVABLE DUNNAGE. CLOSURE LEVEL A: JAW PPP-B-621

LEVEL 8: METHOD V AND REINFORCED IAW PARA 30.5.2 AND 30.5.2.1 OF PPP-B-636.

LEVEL C: METHOD II AND REINFORCED WHEN REQUIRED IAW PARA 30.5.1 OF PPP-B-636.

#### NOTES:

- PRESERVE CRITICAL AREAS WITH MIL-G-81322 OR EQUAL. WRAP IN REF-1 AND SECURE WITH REF-2.
- 2. USE REF-3 OR EQUAL AS REQUIRED TO COMPLETELY ENCLOSE ITEM AND CREATE A SNUG FLT IN CONTAINER.

SPECIFIE	D BELO	W AND BILL	OF MATE	RIALS
(ADD)	4	ā	!	A
	RSC			V3cl
	RSC	CF DE	WZ M	175
	<b>LEVEL</b>	A LEVEL	B LEVEL	L C
T	1.129	.928	.928	
	29	19	19	
ALETY G	110	110	110	
LENGTH	1	HTOW	DEPT	Ή
28		8	6	- 1
	,		_	ł
31		9 1/2	<b>6</b> 5.	/8
C 28 ;	3/8	8 3/8	6 3	/4
53		7 1/4	4 1/	12
5 17				
	C 28 :	28 3/8  C 28 3/8  C 28 3/8	SPECIFIED BELOW AND BILL PEC STYLE TYPE CE  (MOD) 4 2  RSC CF BO  LEVEL A LEVEL T 1.129 .928 BS 29 19 BILLIY G 110 110  LENGTH WIOTH  28 8  31 9 1/2 C 28 3/8 8 3/8 C 23 7 1/4	SPECIFIED BELOW AND BILL OF MATE PEC STYLE TYPE CL VRT  RSC RSC CF DDM SW LEVEL A LEVEL B LEVEL  1 1129 .928 .928 8 .9 19 19 10 110 110 110 LENGTH WIOTH DEPT 28 .8 8 6 31 .9 1/2 6 5 C 28 3/8 8 3/8 6 3 C 23 7 1/4 4 1/4

	REVISIONS		
LTR	DESCRIPTION	DATE	APRV)
<u></u>			
<b> </b>			1
ļ	<u>, , , , , , , , , , , , , , , , , , , </u>		

T M L	OTY REOD	NOMENCLATURE DR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	·	ERIAL SPECIFICATION
-]	_1	VRAP	30 X S6	M(L-8-)21	TYPE I, GRADE A. CLASS 2
-= [	A/R	TAPE	AS REQUIRED X 1/2	PPP-T-97	TYPE ]
	ሳ/ጽ	Crshidning	AS REQUIRED	PPP-C-1797	TYPE 1
3	2	TOP & BYM (LEVEL A ONLY)	29 L/2 X 9 L/2 X 5/16	NN-P-530	GROUP E

)D 🐃 2169 MDD

		CODE ID	SPI NO.	(TPN)
SPECIAL PACKAGING INSTRUCTION		98747	F 01-252	
BI LOINE I MOMMANIA	11011	98/4/	SHEET 1	
PART OR DRAWING NO. NATIONAL STOCK NO.	CURRENT REV	ILL. P. ELLI		
2007101-103 1620-01-252-3344 ITEM NOMENCLATURE	B ORIGINAL	CHK. S. EDW ENGR. K.W. OL	ARDS	
PISTON ASSY, INNER	DATE 89060	AUTH. A. BRIM		
MILITARY PRESERVATION IAW: MIL-STD-2073	PACKING AS S			MATERIALS VRTY GR
SERVICEABLE METHOD: 20 UNSERVICEABLE METHOD: 20	A PF	PP-B-621 4	2	А
QUP 001 ICQ 000	B AS	D5118 RSC LEVEL	A LEVEL B	W5c
CLEANING & DRYING IAW: MIL-STD-2073	GROSS CU F GROSS WT L		.660 . 15	:
PRESERVATIVE MIL-C-11796 OR MIL-C-16173 GRADE 2 CODE 02	DESIGN FRAC	<del>-</del> -	110	DEPTH
MARKING IAW MIL-STD-129  SPECIAL MARKINGS:	CNTR I.D.	28	7	5
A) SPI ND. F01-252-3344	CNTR D.D. LEVEL A:	7 31	5 8 1/2	28 6 1/2
** MARK THE SPI NUMBER ON ONE SIDE OF THE CONTAINER  MARK REUSABLE CONTAINER	LEVEL B:	7 3.		28 3/4
DO NOT DESTROY	ITEM DIM ITEM WT LB	23 S 14	5 1/2	4
		REVIS	SINNS	
CLOSURE	LTR	DESCRIPTION		DATE
LEVEL A: IAW PPP-B-621 LEVEL B: IAW ASTM-D1974		ANGED PRESERVA DRAWING & CHANG	•	93070 DATE 99109

## CAUTION NOTICE

1. THIS PISTON HAS A HISTORY OF CORROSION. INSURE THE PERSERVATIVE IS APPLIED AS INSTRUCTED IN NOTE 1.

## NOTE

- 1. APPLY MIL-C-16173, GRADE 2 PRESERVATIVE ON ALL BARE METAL SURFACES, INCLUDING INSIDE THE HOLLOW TUBE OF THE PISTON ASSEMBLY. INSURE ALL SURFACES ARE COMPLETELY COVERED. WRAP PRESERVED EXPOSED SURFACES WITH -5 AND SECURE IN PLACE WITH A-A-883 TAPE OR EQUAL.
- 2. PLACE END BLOCKS IN CONTAINER PRIOR TO THE ITEM BEING WRAPPED IN -3 CUSHIONING.
- 3. USE -3 OR EQUAL AS REQUIRED TO ENSURE A SNUG FIT IN CONTAINER.
- 4. PISTON ASSEMBLIES MUST BE PACKED TO THIS SPI REVISION.

					<b>1</b> r
-5	A\R	TAPE	3 X A\R	ASTM-D5486	9
-4	2	END BLOCKS	7 X 5 X 2	A-A-59135 CLASS I, GRADE A	ľ
-3	A\R	CUSHIDNING	AS REQUIRED	PPP-C-1797 TYPF I	
-5	A\R	TAPE	AS REQUIRED X 1\2	A-A-883 TYPE I DR II	Γ
-1	1	WRAP	30 X 25	MIL-PRF-121 TYPE I, GRADE A, CLASS 2	
P/N	QTY	NOMENCLATURE	SIZE	MATERIAL SPECIFICATION	
	REQD	DESCRIPTION	(INCHES UNLESS SPECIFIED)	RE VISIONS	

SPECIAL PACKAGING INSTRUCTION	50DE ID 98747	SPI NO. (TPO) F 01-252-3344
ITEM NOMENCLATURE  PISTON ASSY, INNER		SHEET 2 OF 2
PISTON ASSY, INNER		- (-1) - (-3) - (-5)
		- <del>3</del> TYP.

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CODE ID SPI NO. (TPO) SPECIAL PACKAGING INSTRUCTION 98747 01-200-7131 SHEET 1 OF 1 P. RUSSELL 🎉 🚓 CURRENT PART OR DRAWING NO. NATIONAL STOCK NO. REV 1620-01-200-7131 N/A 2006106-105 CHK. P. BURNITT DRIGINAL ITEM NOMENCLATURE ENGR. J. R. BENNETT DATE SNAVE & HTUA PISTON ASSEMBLY 87362 PRESERVATION . [AV MIL-P-116 PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS LEVEL SPEC LEVEL A METHOD IA-8 TYPE CL VRTY GR STYLE B-AI CONTEM & LEVEL B A PPP-B-621 (NOI) 4 2 LEVEL C METHOD III B PPP-B-636 RSC V3c QUP 001 C PPP-B-636 RSC DOM SV 175 CF ICO 000 LEVEL A LEVEL B LEVEL C CLEANING C-1 .694 GROSS CU FF .861 .694 DRYING D-1GROSS VT LBS 25.D0 13.53 13.53 PRESERVATIVE M1L-G-81322 DESIGN FRAGILITY G 110 110 110 MARKING IAV MIL-STD-129 LENGTH VIDTH DEPTH CNTR I.D. 24 7 1/2 5 1/2 SPECIAL MARKINGS: CNTR O.D. SEE BELOV A) SP1 ND. 01-200-7131 ITEM DIM 23 1/8 6 1/2 4 1/4 B) REUSABLE CONTAINER AND DUNNAGE ITEM WT LBS 11.0 DO NOT DESTROY MARK THE SPI NUMBER ON ONE SIDE OF THE REVISIONS CONTAINER AND ON ALL REMOVABLE DUNNAGE. LTR APRVD DESCRIPTION DATE

CLEISURE LEVEL A: PPP-B-62).

LEVEL B: METHED V AND REINFERCED

[AW PARA 30.5.2. AND 30.5.2.1 DF PPP-B-636.

LEVEL C: METHED II AND REINFERCED WHEN

REQUIRED IAW PARA 30.5.1 DF PPP-B-636.

NOTES: 1. PRESERVE CRITICAL AREAS AS NECESSARY WITH MIL-G-81322.

- 2. VRAP PRESERVED AREAS WITH (REF -1). SECURE IN PLACE WITH TAPE (REF -4).
- 3. CUSHION VRAPPED ASSEMBLY WITH (REF -2). SECURE IN PLACE WITH TAPE (REF -4).
- 4. PACKAGE CUSHIONED ASSEMBLY METHOD IA-8 IN BARRIER BAG (REF -3) AND HEAT SEAL (ELIMINATE THIS STEP FOR LEVEL C PACKAGING).

CNTR CLD. LEVEL A: 27 X 9 X 6 1/8, LEVELS 8&C: 24 3/8 X 7 7/8 X 6 1/4 UNLESS OTHERWISE SPECIFIED, DIMENSIONS WILL BE IN INCHES, TOLERANCES: FRACTIONS: + OR - 1/16.

- 5. CUSHION BAGGED ASSEMBLY WITH (REF -2).
  PLACE CUSHIONED ASSEMBLY IN APPLICABLE SHIPPING
  CONTAINER. USE ADDITIONAL CUSHIONING (REF -2)
  TO PROTECT THE BAG AND ASSURE A TIGHT FIT.
- 6. TOP AND BOTTOM OF LEVEL A BOX SHALL BE MADE OF 25 1/2 X 9 X 5/16 PLYWOOD CONFORMING TO NN-P-530, GROUP B OR EQUAL.

PAN REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION
-1   1	VRAP	30 X 26	MIL-B-121, TYPE I, GRADE A, CLASS 2
-2 A/R	CUSHIDNING	A/R	PPP-C-1797, TYPE I
-3 1	BAG	29W X 12L (ID)	MIL-B-117, TYPE I CLASS E STYLE 1
-4 A/R	TAPE	A/R	PPP-T-97, TYPE 1

SPECIAL PACKAGING INSTRUCT	FION	CODE 1D 98747	SPI NO. F01-07 SHEET 1	1-0534
PART OR DRAWING NO. NATIONAL STOCK NO.  2006644-103  ITEM NOMENCLATURE  PISTON, LANDING GEAR	CURRENT REV DRIGINAL DATE 99088	ILL. P. ELLI CHK. S. EDW ENGR. K.W. OL AUTH. A. BRIM	ARDS SON HALL	
MILITARY PRESERVATION IAW: MIL-STD-2073 SERVICEABLE METHOD: 20 UNSERVICEABLE METHOD: 20  QUP 001 ICQ 000 CLEANING & DRYING IAW: MIL-STD-2073 PRESERVATIVE MIL-PRF-16173,GRADE 2, CODE 02  MARKING IAW MIL-STD-129	LEVEL SPE A PE	EC STYL PP-B-621 4 STM-D5118 RSC LEVEL T 1.87 LBS 30	E TYPE CL  A LEVEL B 1.27 23 100	
SPECIAL MARKINGS:  A) SPI NO. F01-071-0534  *MARK THE SPI NUMBER ON THE ONE SIDE OF THE CONTAINER MARK REUSABLE CONTAINER DO NOT DESTROY  CLOSURE  LEVEL A: IAW: PPP-B-621 LEVEL B: IAW: ASTM-D1974	CNTR D.D. CNTR D.D. LEVEL A: LEVEL B: ITEM DIM ITEM WT LE	28 24 19 3S 20	14 3/8 12 3/8	8 1/2 7 1/4 4 1/2 DATE
1 THIS PISTON HAS A HISTORY OF CORROSION. INSURE THE PRESERVATIVE IS APPLIED AS				

## NOTES

INSTRUCTED IN NOTE 1.

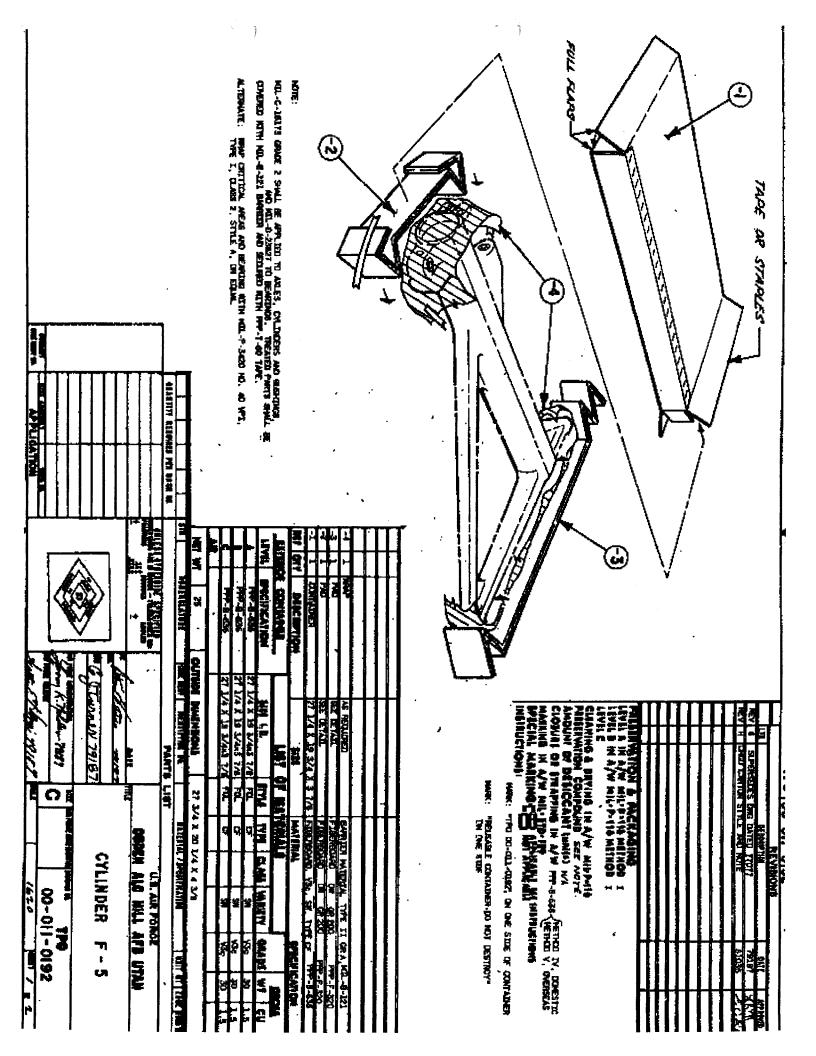
STRING OR SIMILAR METHOD.

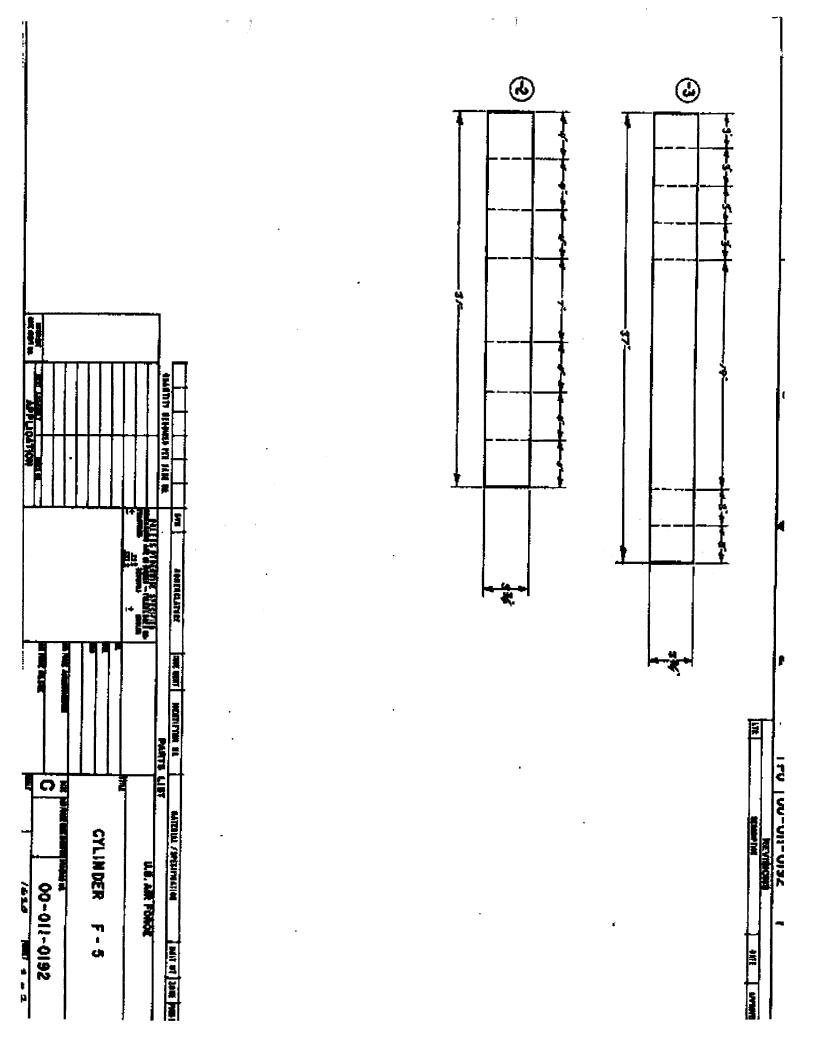
2 GREASE SERTS ARE TO BE REMOVED, PLACED IN A POLY BAG AND ATTACHED TO AN AREA THAT WILL NOT CAUSE CORROSION WITH THE USE OF A

- 1 APPLY MIL-C-16173, GRADE 2 PRESERVATIVE ON ALL BARE METAL SURFACES, INCLUDING INSIDE THE HOLLOW TUBE OF THE PISTON LANDING GEAR. INSURE ALL SURFACES ARE COMPLETELY COVERED. WRAP PRESERVED EXPOSED SURFACES WITH -3 WRAP AND SECURE IN PLACE WITH A-A-883 TAPE -9 OR EQUAL.
- 2 WRAP AND CUSHION PISTON WITH MICROFOAM -7 AND FILL ALL VOIDS SO ITEM IS PACKED VERY SNUG.

					١,
-10	A/R	TAPE	A/R X 3	ASTM-D5486 OR EQUAL	i
-9	A/R	TAPE	A/R X 1	A-A-883 TYPE I OR TYPE II	:
-8	1	PLATTEN	12 X 6 1/2 X 1/8	ASIM-D4727 CF, DOM, SW, GR 200	!
-7	A/R	CUSHIONING	A/R	PPP-C-1797 TYPE 1	1
-6	2	SIDE PADS	19 1/2 X 4 1/2 X 1	A-A-59135 CLASS I. GRADE A	
-5	5	TOP & BOTTOM PADS	19 1/2 X 12 X 1	A-A-59135 CLASS I GRADE A	
-4	5	END PADS	12 X 6 1/2 X 2	A-A-59135 CLASS I, GRADE A	1
-3	A/R	WRAP	A/R	MJI -PRE-121 TY I, GR. A, H.D.	Ļ
-5	1	STRING	A/R	ANY SUTIABLE VARITY	1
-1	1	POLY BAG	4 X 4 X A/R	L-P-378 TYPE I, CL I, GR. A , FIN. I	
P/N	QTY	NOMENCLATURE	SIZE	MATERIAL SPECIFICATION	
'''	REQD	DESCRIPTION	(INCHES UNLESS SPECIFIED)	REVISIONS	

SPECIAL PACKAGING INSTRUCTION	CODE ID 98747	SPI NO. (TPO) F01-071-0534
ITEM NOMENCLATURE Piston, Landing Gear		SHEET 2 OF 2
	R	3) TYP 
8	(5)	TYP



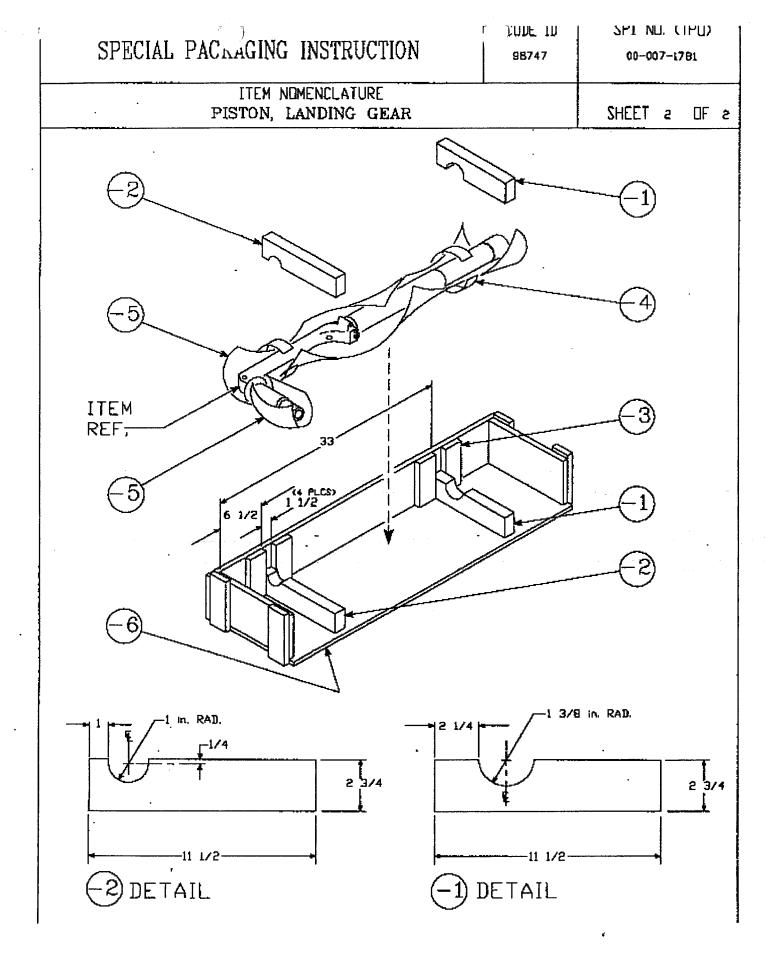


SPECIAL PACKAGING INSTRUCT	TION	DE ID 98747	00-00	ID. (TPD) 17–1781 / DF 2
PART OR DRAWING NO. NATIONAL STOCK NO.	CURRENT REV	ILL. D. HEISE	Month	in
14-406059 1620000071761		CUIV	٠ ٢	La la
ITEM NOMENCLATURE	ORIGINAL	CHK. F. LAND ENGR. S. METER		Services .
PISTON, LANDING GEAR	DATE	AUTH, B. EVAN		ano
PRESERVATION (AW MIL-P-116	PACKING AS	SPECIFIED BELD	W AND BILL	DF MATERIALS
LEVEL A METHOD I	L'EVEL SP	EC STYLE	TYPE CL	VRTY GR
LEVEL B METHOD I LEVEL C METHOD I (REPARABLES)	A PPP-B-62	=	<b>2</b> ·	A
QUP OOI	B PPP-B-62;		1	B
ICQ 000	C PPP-B-62:	נשטאי <del>ל</del> LEVEL	A LEVEL I	LEVEL C
CLEANING C-1	GROSS CU F			
DRYING D-1	CROSS AL F		2.116 57	5.116
PRESERVATIVE MIL-C-16173. GRADE 2	DESIGN FRAC		57 100	57 100
MARKING [AV MIL-STD-129	BESIGN 1 NA			
SPECIAL MARKINGS:		LENGTH	WIDTH	DEPTH
A) SPI NO. 00-007-1781	CHTNR I.D.	42	11 1/2	5 1/2
MARK THE SPI NUMBER ON ONE SIDE OF THE	CNTNR O.D.			
CONTAINER AND ON ALL REHOVABLE DUNNAGE	LEVEL A	45	13	. 7
CLOSURE IAW PPP-B-621	LEVEL B &	_	13	6 1/4
,	ITEM DIM	40	10	5
	ITEM WT LB:	\$ 36		
NOTES:	<u> </u>	REVIS	TITILIC	
1 USE MIL-C-16173, GRADE 2, ON CRITICAL SURFACES AND WRAP WITH REF-5.	LTR	DESCRIPTION	DA.	TE APRVD
TAPE TO SECURE USING A-A-883 TAPE OR EQUAL.		DESCRIPTION	Un	IE WERAT
2. USE THE PLYWOOD TOP & BOTTOM (P/N -6) FOR LEVEL B AND C SHIPMENTS DNLY.				
	UNLESS OTH	erwise specified	. DIMENSIONS	

UNLESS OTHERWISE SPECIFIED, DIMENSIONS WILL BE IN INCHES. TOLERANCES: FRACTIONS: + OR - 1/16

_					
-6	2	T & B (LEV B & C DNLY)		NN-P-530	GROUP B
-5	A/R	WRAP	AS REQU	MIL-8-121	TYPE II, GRADE A, CLASS 2
-4		CUSHIONS	A/R X 3 X 1/2	PPP-P-115	TYPE I
-3		CLEATS	5 1/2 X 2 1/2 X 3/4	NN-P-530	GROUP B
2	2	SADDLES	2 3/4 X 1 1/2 (ACT) X 11 1/2	MEL-STII-731	CLASS 2
-1	2	SADDLES	2 3/4 X 1 1/2 (ACT) X 11 1/2	MIL-STII-731	CLASS 2
F/N			RIAL SPECIFICATION		

\$21 NO. 00-007-1781



F THE	
IISED.	
ASSEMBLING ID WOOD REES JMBER TURED WOOD USDA.GOV.	
	9
LASS A	5
TYLE A	
IN B	1
177	. 1

	· ·					
SPECIAL PAG	CKAGING INSTRUCT	'ION	CDDE ID 98747		[], (TP[  52-404;	
				SHEET 1	<u>OF</u>	2
PART OR DRAWING NO.	NATIONAL STOCK NO.	CURRENT REV	ILL. T. LUCE	ERO ·		
2007602-103	1620-01-252-4042	В	CHK, T. ZIMM	IERMAN		
ITEM NOME	NCLATURE	ORIGINAL	ENGR, K.W. OL	.SDN		
PISTON A	SSEMBLY	DATE 89167	AUTH, A. BRIM	IHALL		
MILITARY PRESERVATIO	N IAW MIL-STD-2073	PACKING AS	SPECIFIED BELD	JW AND BILL	OF MATE	RIALS
SERVICEABLE METHOD	20	LEVEL SF	PEC STYLE	TYPE CL	VRT)	Y GR
UNSERVICEABLE METHOD	20	A PPP-B-62	1 (MDD) 4	2		Α
QUP 001		B PPP-B-62	1 (MOD) 4	1		В

QUP 001
ICQ 000
CLEANING & DRYING IAW MIL-STD-2073
PRESERVATIVE MIL-PRF-16173, GR 2, CDDE 02
MARKING IAW MIL-STD-129

MARKING IAW MIL-STD-129 SPECIAL MARKINGS:

A) SPI NO. F01-252-4042

MARK THE SPI NUMBER ON DNE SIDE OF THE CONTAINER AND ON ALL REMOVABLE DUNNAGE. MARK REUSABLE CONTAINER DO NOT DESTROY

# CLOSURE IAW PPP-B-621 CAUTION NOTICE

I. THIS PISTON HAS A HISTORY OF CORROSION. INSURE THE PRESERVATIVE IS APPLIED AS INSTRUCTED IN NOTE 1.

#### NOTES:

1. APPLY MIL-PRF-16173, GRADE 2 PRESERVATIVE ON ALL BARE METAL SURFACES, INCLUDING INSIDE HOLLOW TUBE OF THE PISTON ASSEMBLY. INSURE ALL SURFACES ARE COMPLETELY COVERED. WRAP PRESERVED EXPOSED SURFACES WITH -5 AND SECURE IN PLACE WITH A-A-883 TAPE OR EQUAL.

LEVEL A LEVEL B GROSS CU FT 2.474 2.474 GROSS WT LBS 54 54 DESIGN FRAGILITY G 100 100 DEPTH LENGTH MIDTH CNTR I.D. 35 11 8 CNTR D.D. 38 12 1/2 9 ITEM DIM 9 5 1/2 35 ITEM WT LBS 31

	RE VISIONS	
LTR	DESCRIPTION	DATE
Α	ADD NOTES & UPDATE	99129
В	UPDATE/ADD WOOD STATEMENT	01320

- 2. SOURCE OF SUPPLY FOR TORQUE WASHERS, CATALOG NO. MS-98398K2915: TRW FASTENER DIV.
- 31 AMES ST.
- CAMBRIDGE, MASS. 02142, DR LOCAL PURCHASE
- 3. PISTONS PACKED IN PREVIOUS ADDITIONS OF THIS SPI DO NOT REQUIRE REPACKING IF THE INTEGRITY OF THE SPI IS NOT COMPROMISED.

NOTICE 1: TRAFFIC MANAGEMENT OFFICES OR ANY ACTIVITY BUYING SOLID WOOD MATERIAL TO USE FOR BUILDING OR ASSEMBLING PACKAGING MUST COMPLY WITH THE FOLLOWING REQUIREMENT FOR PURCHASING THE WOOD: "ALL WOODEN PALLETS AND WOOD CONTAINERS PRODUCED OF NON-MANUFACTURED WOOD SHALL BE CONSTRUCTED FROM HEAT TREATED (HT TO 56 DEGREES CENTIGRADE FOR 30 MINUTES) MATERIAL AND CERTIFIED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.

L						-
12	A/R	TAPE	1 X A/R	A-A-883	TYPE I OR II	Ī
-11	6	NUTS	3/8	FF-N-836	TYPE II, STYLE 4	12 C
-10	6	WASHERS	3/8	FF-W-92	TYPE A, GRADE I, CLASS A	ī,
- 9	6	TORQUE WASHERS	to fit 3/8 BDLT	5310-00-936-	9532 (SEE NOTE 2)	
-8	6	BOLTS	3/8 X 5	FF-B-584	TYPE I, CLASS 1, STYLE A	9-
7	3	STRAPPING	A/R X 1 1/4 X .035	ASTM-D3953	TYPE I, REG DUTY, FIN B	55
-6	3	CUSHIONING	A/R X 3 X 1/4	PPP-PRF-115	TYPE I (CARGO PACK)	-2
-5	1	WRAP	20 X 12	MIL-PRF-121	TYPE I, GRADE A, CLASS 1	404
- 4	1	WRAP	8 X 8	MIL-PRF-121	TYPE I, GRADE A, CLASS 1	45
-3	2	SADDLES	2 X 4 (NOM) X 8	ASTM-D6199	CLASS 2	7
-2	1	SADDLE	2 X 4 (NOM) X 7	ASTM-D6199	CLASS 2 .	
<u> </u>	2	TOP & BOTTOM	36 1/2 X 12 1/2 X 1/2	A-A-55057	TYPE A	
P/N	QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATER	RIAL SPECIFICATION	

# SPECIAL PACKAGING INSTRUCTION

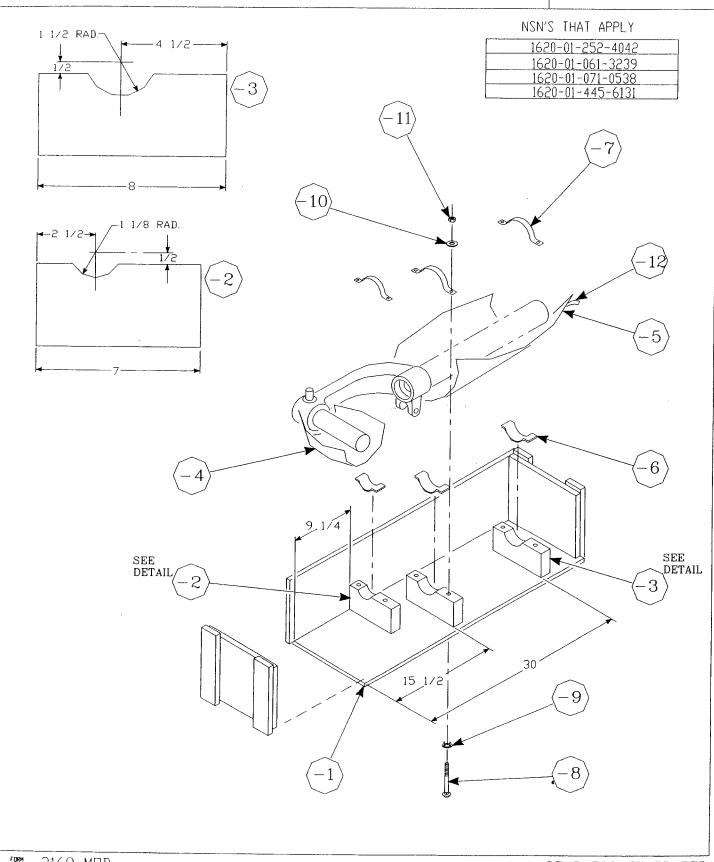
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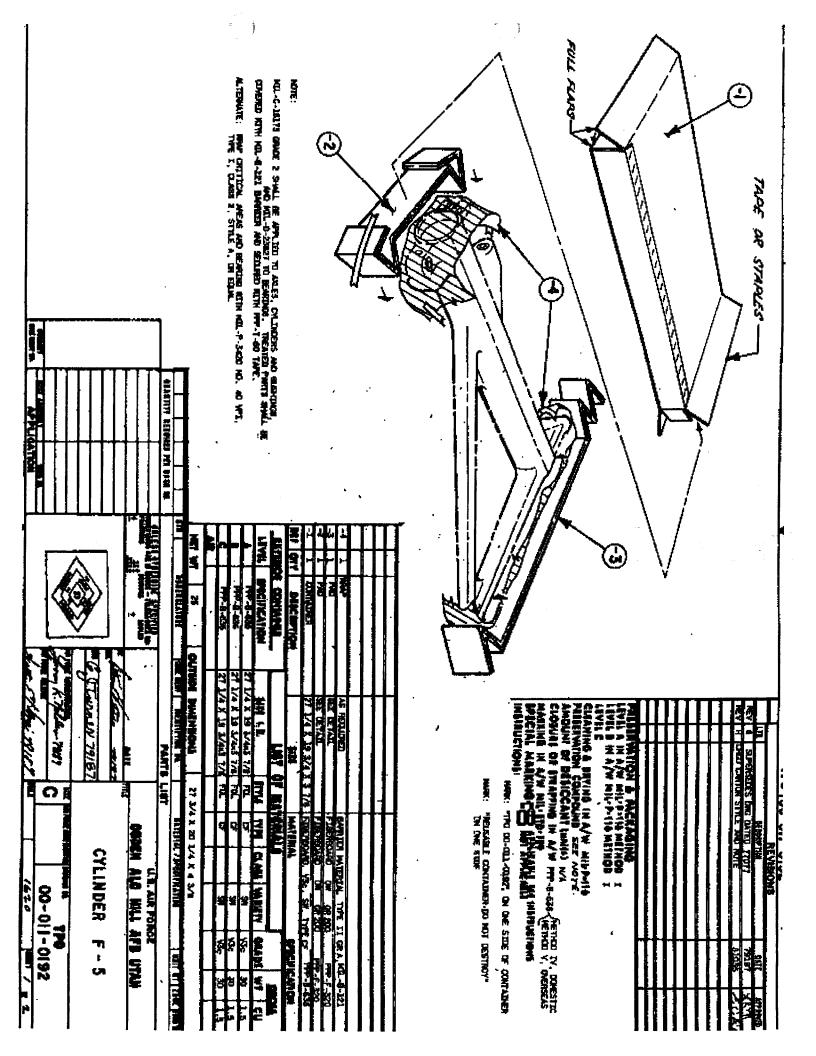
SPI NO. (TPO)

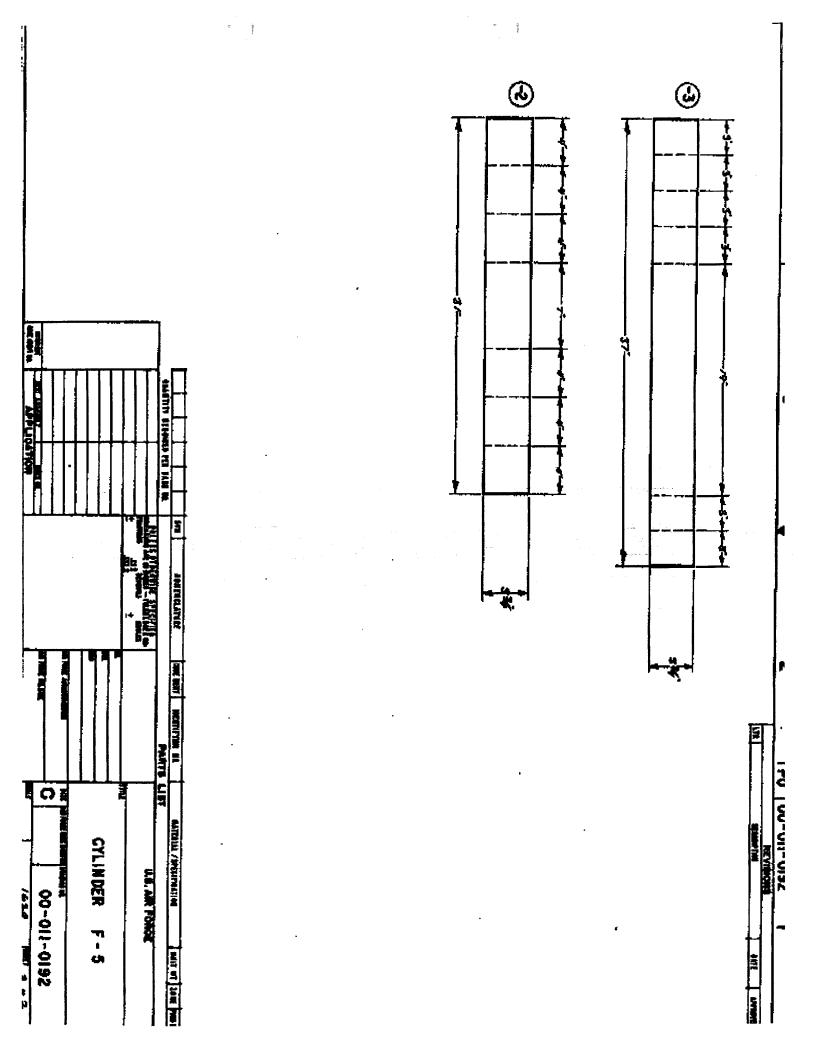
F01-252-4042

ITEM NUMENCLATURE PISTON ASSEMBLY

SHEET 2 OF 2







OF BOTHE I WON	AG G INSTRUCTI	ON	9٤ 7	00-	417-624	19
			_	SHEET		F 4
PART OR DRAWING NO.   1	NATIONAL STOCK NO.	CURRENT	ILL. E. NYE	× 12	<u> </u>	
7926445	1620-00-417-6249	re v A				
ITEM NOMENO		DRIGINAL	CHK, P. FRAI	بخرب S10v	property in	· ·
PISTON, LANDING (		BATE	ENGR. V. EL			
		8)246	AUTH. B. EV.	ANS ZJ	Ewa,	アシウ
PRESERVATION IAV MIL-P	-116 PAC	KING AS	SPECIFIED BEL	OV AND B	ILL OF I	MATERIAL
LEVEL A METHOD I	L£,	VEL SPEC		TYPE CL		Y GR
LEVEL B METHOD I		MiL-B-261950		11 }		
OUP OOI		MIL-B-261950		I 1		
[CQ 000	L	: MIL-8-26195(	MOD) A LEVEI	1 1		ביירו פ
CLEANING METHOD C-1		GROSS CU F			ELBU	7.287
DRY(NG METHOD D-)	CDARC I	GROSS WT &		560		60
PRESERVATIVE MIL-C-16173, IARKING JAW MIL-STD-129	UKAUL [	DESIGN FRAC	ALITY G 110	110	_	110
ARKING IAW MIL-STI)-129 SPECIAL MARKINGS:		CNTD ID	LENGTH	HTQIV		
A) SPI NO. 00-417-6249	MARK THE COI	CNTR I.D. CNTR D.D.	76 78	24	18	
NUMBER ON DNE SIDE OF THE	CONTAINER AND	ITEM DIM	76 71	26 17	2. 14	3 1/4
DN ALL REMOVABLE DUNNAGE.		ITEM WI LBS		17	17	•
8) CAUTION LIFT BY BASE OF C) TO OPEN REMOVE LAG BO			OCV1	S(UNS	~	
D) CENTER OF BALANCE (SEE	CIS	LTR	DESCRIPTION	7(nix?	DATE	APRVD
	. HOIL OF		TELY REVISED,	LIPDATED.	שונ	HEKVI
~NOT[CE-		AND RE	DRAWN		88347	1045
ITEMS ALREADY PACKED ACCORDIN	G TO PREVIOUS					
EDITIONS OF THIS SPECTED DO REPACKING.	NOT REQUIRE					ļ
I USINE IN ACCORDANCE PARTY	II DO D AZAMA	<u> </u>				
LOSURE IN ACCORDANCE WITH	4 MIT-8-50122					
2 22 CORNER STRAPS (SEE NOT		QQ-S-78	1 CLASS ), T	YPE IL RE	G DUTY.	FIN A
1 3 JOISTS 0 12 LATERAL JOIST SUPPOR	1 X 4(NDM) X 24	MIL-STD		2		
	778 4 44 141					
9 6 VERTICAL JUIST SUPPO	CVI C V CHINNA X 1 ZIS	M3L-STD	-731 CLASS		· · · · · · · · · · · · · · · · · · ·	·
1 6 VERTICAL JUIST SUPPO	RTS 1 X 4(NOH) X 3 1/2 RTS 1 X 3(NOH) X 13	MIL-STD MIL-STD	-731 CLASS			
B A/R TAPE 7 1 WRAP	RTS 1 X 4(NOM) X 3 1/2 RTS 1 X 3(NOM) X 13 AS REQUIRED X 2 AS REQUIRED	MIL-STD MIL-STD PPP-T-7 MIL-8-1	-731 CLASS -731 CLASS '6	2	4 CL 2	
B A/R JAPE 7 1 WRAP 6 2 CHAFFING STRIPS	RTS 1 X 4(NDM) X 3 1/2  RTS 1 X 3(NDM) X 13  AS REQUIRED X 2  AS REQUIRED  AS REQUIRED X 3 X 1/2	M3L-STD M6L-STD PPP-T-7 M3L-8-6 (2 PPP-P-1)	-731 CLASS -731 CLASS '6 21 TY 15 TYPE J DR	PE I ĞR / ' EQÜAL		
B A/R JAPE 7 J VRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING	RTS 1 X 4(NDM) X 3 1/2 RTS 1 X 3(NDM) X 13 AS REQUIRED X 2 AS REQUIRED AS REQUIRED X 3 X 1/ 0.035 X 1 1/4 X A/R	MIL-STD MIL-STD PPP-T-7 MIL-8-1 (2 PPP-P-1) QQ-S-78	-731 CLASS -731 CLASS '6 21 TY 15 TYPE J OR L CL L TYPE	PE I, ĞŘ / ' EQÛAL I, HVY IV	ITY, FIN	A
B A/R TAPE 7 1 WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 12 NUTS	RTS 1 X 4(NDM) X 3 1/2 RTS 1 X 3(NDM) X 13 AS REQUIRED X 2 AS REQUIRED AS REQUIRED X 3 X 1/ 0.035 X 1 1/4 X A/R 3/8	MIL-STD MIL-STD PPP-T-7 MIL-B-1 (2 PPP-1) QQ-S-78 FF-N-83	-731 CLASS -731 CLASS '6 21 TY 15 TYPE J OR 1 CL 1, TYPE 6 TYP	PE I, GR / PEQUAL I, HVY BU E II, STY	TY, FIN	A
B A/R JAPE 7 J WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 IZ NUTS 3 20 WASHERS 2 IZ WASHERS	RTS 1 X 4(NDM) X 3 1/2 RTS 1 X 3(NDM) X 13 AS REQUIRED X 2 AS REQUIRED AS REQUIRED X 3 X 1/ 0.035 X 1 1/4 X A/R	M3L-STD MfL-STD PPP-T-7 M1L-B-1 (2 PPP-P-1) QQ-S-78 FF-N-83	-731 CLASS -731 CLASS 'G 21 TY 15 TYPE J OR 1 CL 1, TYPE 6 TYPE	PE I, GR / ' EQUAL I, HVY INU E II, STYI I, GR I, CI	ITY, FIN LE 4 LASS A	A
B A/R JAPE 7 J WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 12 NUTS 3 20 WASHERS 1 4 JORQUE WASHERS	RTS 1 X 4(NDM) X 3 1/2  RTS 1 X 3(NDM) X 13  AS REQUIRED X 2  AS REQUIRED X 3 X 1/2  AS REQUIRED X 3 X 1/2  0.035 X 1 1/4 X A/R  3/8  1/4  3/8  TO FIT 3/8 BOLT	MIL-STD MIL-STD PPP-T-7 MIL-B-1 (2 PPP-1) QQ-S-78 FF-N-83	-731 CLASS -731 CLASS '6 21 TY 15 TYPE J OR 1 CL J TYPE 6 TYPE 1 YPE J	PE I, GR / PEQUAL I, HVY BU E IJ, STY! J, GR I, CI J, GR I, CI	ITY, FIN LE 4 LASS A	A
B A/R JAPE 7 J WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 12 NUTS 3 20 WASHERS 1 1 WASHERS 1 2 WASHERS 1 2 LAG BOLTS	RTS 1 X 4(NDM) X 3 1/2 RTS 1 X 3(NDM) X 13 AS REQUIRED X 2 AS REQUIRED X 3 X 1/2 AS REQUIRED X 3 X 1/4 AS REQUIRED X 3 X 1/2 AS REQUIRED X 1/2 AS REQUIRED	Mil-STD Mil-STD Mil-STD PPP-T-7 Mil-B-i (2 PPP-P-1) QQ-S-78 FF-N-83 FF-N-92 FF-V-92 SEE NOTE FF-B-56	-731 CLASS -731 CLASS '6 21 TY 15 TYPE J OR L CL I, TYPE 6 TYPE J TYPE J TYPE J 1 5310-00-9	PE I, GR / PEQUAL I, HVY BU E IJ, STYI J, GR I, CI J, GR I, CI 36-9532 E I, STYI	TY, FIN LE 4 LASS A LASS A	P
B A/R JAPE 7 1 WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 12 NUTS 3 20 WASHERS 1 2 WASHERS 1 4 JORQUE WASHERS 1 20 LAG BOLIS 6 BOLIS 6 BOLIS	RTS 1 X 4(NDM) X 3 1/2  RTS 1 X 3(NDM) X 13  AS REQUIRED X 2  AS REQUIRED  AS REQUIRED X 3 X 1/2  0.035 X 1 1/4 X A/R  3/8  1/4  3/8  TO F17 3/8 BOLT  2 1/2 X 1/4  13 X 3/8	MIL-STD MIL-STD PPP-T-7 MIL-8-1 (2 PPP-P-1 QQ-S-78 FF-N-92 FF-W-92 SEE NOTE FF-B-56 FF-B-58	-731 CLASS   -731	PE I, GR / PEQUAL I, HVY BU E IJ, STYI A, GR I, CI 36-9532 E I, STYI CLASS I	TY, FIN LE 4 LASS A LASS A E 1. GR	P A
B A/R TAPE 7 1 WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 12 NUTS 3 20 WASHERS 2 12 WASHERS 1 20 LAG BOLTS 6 BOLTS 6 BOLTS 2 SADDLE SUPPORTS	RTS 1 X 4(NDM) X 3 1/2  RTS 1 X 3(NDM) X 13  AS REQUIRED X 2  AS REQUIRED  AS REQUIRED X 3 X 1/2  0.035 X 1 1/4 X A/R  3/8  1/4  3/8  TO FIT 3/8 BOLT  2 1/2 X 1/4  13 X 3/8  7 X 3/8	M3L-STD M(L-STD M(L-STD PPP-T-7 M1L-8-1 (2 PPP-P-1 QQ-S-78 FF-N-83 FF-V-92 SEE NOTE FF-B-56 FF-B-58	-731 CLASS   -731	PE I, GR / PE I, GR / PE II, GR / PE II, STYI PE II, SR PE III, SR PE IIII, SR PE IIII, SR PE IIII, SR PE IIII PE III PE IIII PE IIII PE IIII PE IIII	TY, FIN LE 4 LASS A LASS A E 1. GR . STYLE . STYLE	P A
A CHAPTICAL JOIST SUPPORTS  A AR JAPE  J J WRAP  CHAFFING STRIPS  SIRAPPING  RICHAFFING STRIPS  SIRAPPING  VASHERS  LA JORQUE WASHERS  LAG BOLTS  BOLTS  SADDLE SUPPORTS	RTS 1 X 4(NDM) X 3 1/2 RTS 1 X 3(NDM) X 13 AS REQUIRED X 2 AS REQUIRED X 3 X 1/ 0.035 X 1 1/4 X A/R 3/8 1/4 3/8 TO F17 3/8 BOLT 2 1/2 X 1/4 13 X 3/8 7 X 3/8 7 1/2 X 24 X 5/16 7 1/2 X 24 X 5/16	MIL-STD MIL-STD MIL-B-1 MIL-B-1 /2 PPP-P-1 QQ-S-78 FF-N-83 FF-V-92 SEE NOTE FF-B-58 FF-B-58 FF-B-58	-731 CLASS   -731	PE I, GR / PE I, GR / PE II, STYI PE III PE II PE III PE II PE III PE II PE III PE I	TY, FIN LE 4 LASS A LASS A LASS A E 1. GR L SIYLE L SIYLE LE DETA	P A A A A A A A A A A A A A A A A A A A
B A/R JAPE  7 J WRAP  6 2 CHAFFING STRIPS  5 2 STRAPPING  4 12 NUTS  3 20 WASHERS  1 4 JORQUE WASHERS  1 20 LAG BOLTS  6 BOLTS  6 BOLTS  2 SADDLE SUPPORTS  1 BASE	RTS 1 X 4(NDM) X 3 1/2 RTS 1 X 3(NDM) X 13 AS REQUIRED X 2 AS REQUIRED X 3 X 1/ 0.035 X 1 1/4 X A/R 3/8 1/4 3/8 1/4 3/8 10 F17 3/8 BOLT 2 1/2 X 1/4 13 X 3/8 7 1/2 X 24 X 5/16 7 1/2 X 24 X 5/16 76 X 24 X 3/4	MIL-STD  MIL-STD  MIL-STD  PPP-T-7  MIL-B-1  (2 PPP-P-1)  QQ-S-78  FF-N-83  FF-N-92  FF-N-92  SEE NOTE  FF-B-56  FF-B-58  NN-P-53  NN-P-53  NN-P-53	-731 CLASS	PE I, GR / PE I, GR / PEQUAL I, HVY BU E II, STYI A, GR I, CI A, G	TY, FIN LE 4 LASS A LASS A E 1. GR . STYLE . STYLE	P A A A A A A A A A A A A A A A A A A A
B A/R JAPE 7 J WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 12 NUTS 3 20 WASHERS 1 4 JORQUE WASHERS 1 4 JORQUE WASHERS 1 20 LAG BOLTS 6 BOLTS 7 SADDLE SUPPORTS 1 BASE 1 SADDLE	RTS 1 X 4(NDM) X 3 1/2 RTS 1 X 3(NDM) X 13 AS REQUIRED X 2 AS REQUIRED X 3 X 1/ 0.035 X 1 1/4 X A/R 3/8 1/4 3/8 10 F17 3/8 BOLT 2 1/2 X 1/4 13 X 3/8 7 X 3/8 7 1/2 X 24 X 5/16 7 1/2 X 24 X 3/4 2 X B(NDM) X 24	Mil-Std Mil-Std PPP-T-7 Mil-B-1 (2 PPP-P-1) QQ-S-78 FF-N-83 FF-N-92 FF-N-92 SEE NOTE FF-B-56 FF-B-58 NN-P-53 NN-P-53 MIL-Std-	-731 CLASS   -731	PE I, GR / PE I, GR / PE II, STYI PE II, STYI PE II, STYI PE II, CI PE II, STYI PE III, STYI PE II, ST	TY, FIN LE 4 LASS A LASS A E J. GR STYLE STYLE EE DETA EE DETA	P A A A A A A A A A A A A A A A A A A A
B A/R JAPE 7 J WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 12 NUTS 3 20 WASHERS 1 4 JORQUE WASHERS 1 20 LAG BOLTS 6 BOLTS 6 BOLTS 2 SADDLE SUPPORTS 1 BASE 1 SADDLE	RTS 1 X 4(NDM) X 3 1/2  RTS 1 X 3(NDM) X 13  AS REQUIRED X 2  AS REQUIRED X 3 X 1/2  AS REQUIRED X 3 X 1/2  0.035 X 1 1/4 X A/R  3/8  1/4  3/8  10 F17 3/8 BOLT  2 1/2 X 1/4  13 X 3/8  7 X 3/8  7 1/2 X 24 X 5/16  76 X 24 X 3/4  2 X 8(NDM) X 24  2 X 8(NDM) X 24	MIL-STD  MIL-STD  MIL-STD  MIL-STD  MIL-STD  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-	-731 CLASS   -731	PE I, GR / PE I, GR / PE II, STYI PE II, STYI PE II, STYI PE II, CI PE II, STYI PE III, STYI PE II, ST	TY, FIN LE 4 LASS A LASS A E 1. GR STYLE SIYLE EE DETA	P A A A A A A A A A A A A A A A A A A A
B A/R JAPE 7 J WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 12 NUTS 3 20 WASHERS 1 4 JORQUE WASHERS 1 4 JORQUE WASHERS 1 20 LAG BOLTS 6 BOLTS 6 BOLTS 2 SADDLE SUPPORTS 1 BASE 1 SADDLE 1 SADDLE	RTS 1 X 4(NDM) X 3 1/2  RTS 1 X 3(NDM) X 13  AS REQUIRED X 2  AS REQUIRED X 3 X 1/2  AS REQUIRED X 3 X 1/2  0.035 X 1 1/4 X A/R  3/8  1/4  3/8  10 F17 3/8 BOLT  2 1/2 X 1/4  13 X 3/8  7 X 3/8  7 1/2 X 24 X 5/16  7 1/2 X 24 X 5/16  76 X 24 X 3/4  2 X 8(NDM) X 24  2 X 8(NDM) X 24  2 X 8(NDM) X 76	MIL-STD  MIL-STD  MIL-STD  MIL-STD  MIL-STD  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-	-731 CLASS   -731	PE I, GR / PE I, GR / PE II, STYI PE II, STYI PE II, STYI PE II, CI PE II, STYI PE III, STYI PE II, ST	TY, FIN LE 4 LASS A LASS A E J. GR STYLE STYLE EE DETA EE DETA	P A A A A A A A A A A A A A A A A A A A
B A/R JAPE 7 J WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 12 NUTS 3 20 WASHERS 1 4 JORQUE WASHERS 1 4 JORQUE WASHERS 1 80 LAG BOLTS 6 BOLTS 2 SADDLE SUPPORTS 1 BASE 1 SADDLE 1 SADDLE 2 HEADERS 5 SKIDS	RTS 1 X 4(NDM) X 3 1/2  RTS 1 X 3(NDM) X 13  AS REQUIRED X 2  AS REQUIRED X 3 X 1/  0.035 X 1 1/4 X A/R  3/8  1/4  3/8  10 F17 3/8 BOLT  2 1/2 X 1/4  13 X 3/8  7 X 3/8  7 1/2 X 24 X 5/16  7 1/2 X 24 X 5/16  7 1/2 X 24 X 3/4  2 X 8(NDM) X 24  2 X 8(NDM) X 24  2 X 4(NDM) X 26	MIL-STD  MIL-STD  MIL-STD  MIL-STD  MIL-STD  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-	731 CLASS 731 CLASS 76 21 TY 15 TYPE J OR 1 CLASS 1 TYPE J OR 1 TYPE 1 T	PE I, GR / PE I, GR / PE I, GR / PE II, STYI PE III PE II, STYI PE III PE I	TY, FIN LE 4 ASS A ASS A E 1. GR STYLE STYLE EE DETA EE DETA	P A A A A A A A A A A A A A A A A A A A
B A/R JAPE 7 J WRAP 6 2 CHAFFING STRIPS 5 2 STRAPPING 4 12 NUTS 3 20 WASHERS 1 12 WASHERS 1 2 WASHERS 1 3 JORQUE WASHERS 1 3 JORQUE WASHERS 1 4 JORQUE WASHERS 1 5 BOLTS 2 SADDLE SUPPORTS 1 BASE 1 SADDLE 1 SADDLE 2 HEADERS 5 SKIDS	RTS 1 X 4(NDM) X 3 1/2  RTS 1 X 3(NDM) X 13  AS REQUIRED X 2  AS REQUIRED X 3 X 1/2  AS REQUIRED X 3 X 1/2  0.035 X 1 1/4 X A/R  3/8  1/4  3/8  10 F17 3/8 BOLT  2 1/2 X 1/4  13 X 3/8  7 X 3/8  7 1/2 X 24 X 5/16  7 1/2 X 24 X 5/16  76 X 24 X 3/4  2 X 8(NDM) X 24  2 X 8(NDM) X 24  2 X 8(NDM) X 76	MIL-STD  MIL-STD  MIL-STD  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-  MIL-STD-	-731 CLASS   -731	PE I, GR / PE I, GR / PE I, GR / PE II, STYI PE III, STYI PE II, STYI PE III PE II, STYI PE III PE	TY, FIN LE 4 ASS A ASS A E 1. GR STYLE STYLE EE DETA EE DETA	P A A A A A A A A A A A A A A A A A A A

SPECIAL PACKAGING INSTRUCTION	CO 10 98747	SPI NO. (TPO) 00-417-6249
ITEM NOMENCLATURE PISTON, LANDING GEAR C-5		SHEET 2 OF 4
17 (-1) (-1) (-1) (-1) (-1) (-1) (-1) (-1)		-15 -18 -19 -19

DD 2169c MOD

COMPUTER GENERATED

SPECIAL PACKAGING INSTRUCTION	CE 10 98747	SPI NO, (TPO) 00-417-6249
ITEM NOMENCLATURE PISTON, LANDING GEAR C-S		SHEET 3 DF 4
USE CORNER STRAPPING 222  ON LEVEL A PACKS DRLY  357  46 PLESS  FRONT		

# SPECIAL PACKAGING INSTRUCTION

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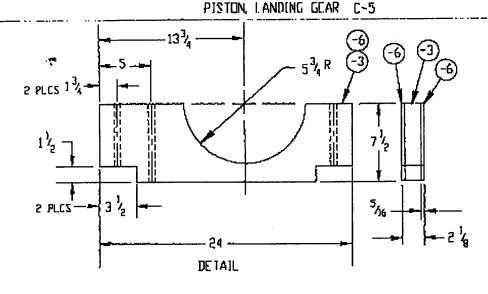
98747

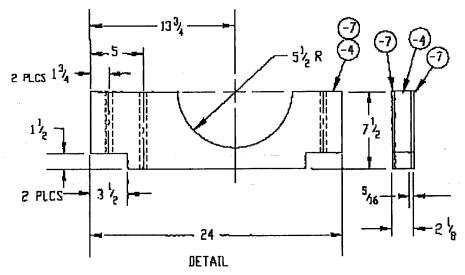
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00-417-6249

ITEM NOMENCLATURE

SHEFT 4 OF 4





## NOTES:

1. SOURCE OF SUPPLY FOR TORQUE WASHERS, CATALOG NO. MS-98398K2915:

TRV FASTENER DIV. 31 AMÉS STREET CAMBRIDGE MASS. 02142

- 2. PRESERVE CRITICAL AREAS WITH MIL-C-16173, GRADE 1 DR EQUAL. WRAP IN -17 USING -18 TD SECURE WRAP.
- 3. CHAFFING STRIP, -16, SHALL BE USED AT ALL POINTS WHERE (TEM VOULD OTHERWISE CONTACT VOOD BLOCKING OR METAL STRAPPING.

- 4. SADDLE SUPPORTS, -6 AND -7, SHALL BE SECURED TO SADDLES -3 AND -4; AND CORNER STRAPS, -22, TO CONTAINER USING 3d NAILS CONFORMING TO FF-N-105, TYPE II OR EQUAL.
- 5. EXTERIOR CLEATS VILL HAVE THE SAME SPACING AS VERTICAL JOIST SUPPORTS. VERTICAL AND LATERAL JOIST SUPPORTS SHALL BE SECURED TO SIDE PANELS AND CLEATS USING 6d MAILS CONFORMING TO FF-N-105, TYPE II DR EQUAL.
- 6. CENTER OF BALANCE WILL BE MARKED ON UUT-SIDE OF CONTAINER JAW MIL-STD-129 PARA 20.27.

ø4°						
8.	PECIAL PACE	AGING INSTRU	CTION	CODE ID 98747	SPI NO.(TP) 00-195-4810	) }
			· · · · · · · · · · · · · · · · · · ·		SHEET 1 OF	3
PART	OR DRAWING NO.	NATIONAL STOCK NO.	CURRENT	LL D. HEISE	Don Heise	_
	7327022-30	1620-00-195-4810	175.4	,		
	ITEM NOME		ORIGINAL	CHK C. KLEEB	CAREEL	
			DATE	ENCR S. MORAN	1 Moran	
	CYLINDER, LAN	IDING GEAR	85343	AUTH R. ELBRAD	ER & Maran &	E01
PRE	SERVATION JAW N	4IL-P-116	PACKING AS	SPECIFIED BELOW A	NO BILL OF MATERIALS	
	VEL A METHOD I		LEVEL	SPEC STYL	E TYPE CL VRTY	CR
	VEL B METHOD I			-26195 0100) A	II 1	
Lt. QL	VEL C METHOD I JP 1 EA.			-26195 (MOD) A -26195 (MOD) A	Į i I i	
ĨC			C PIL-B		7	_
	EANING C-1		GROSS CU F	LEVEL A T 19.3	LEVEL B LEVEL	
	RYING D-1		GROSS WT L	_ ,,,,	19.3 19.3 212 212	
PF	RESERVATIVE MIL-	2-3420 (SEE NOTE)		SILITY G 100	100 100	
MARI	KING IAW MIL-STD			LENGTH	WIOTH DEP	
	ECIAL MARKINGS:	4045	CNTNR LD.	56	26 151/2	
	SPINO. DO-195-	4810 R ON ONE SIDE OF THE	CNTNR O.D.			
بق	CONTAINER, AND ON A	LL REMOVABLE DUNNAGE.	LEVEL A	58	28 201/	
		6195 AND THIS DRAWING.	LEVEL B		28 201/	
			ITEM DIM ITEM WT LB:	52 5 118	23 12%	, }
	- NOTICE -		II CIG IF I CD.	, 110		Ì
ÇQ	NSULT YOUR MICROFIC	HE SPI (TPO)	SOURCE OF	SUPPLY FOR T	ORGUE WASHER	- 1
CR I.A	OSS REFERENCE FILE TEST SPI (TPO) IN EFF	TO DETERMINE	CARR FASTE	MBER MS-9839 NER CO.	8	
(SF	E AFR 71-9, PARA 13-	9),	31 AMES ST.	MASS, Ø2142		14 1
			WILL BE IN	INCHES. : FRACTIONS: +	TED, DIMENSIONS OR - 1/8,	
9 A/R	BARRIER, VPI	A/R	WILL BE IN TOLERANCES DECIMALS: +	INCHES. : FRACTIONS; + OR - ,125.	OR - 1/8,	
8 A/R	TAPE	A/R ½ X A/R	WILL BE IN TOLERANCES	INCHES. FRACTIONS; + OR125.	OR - 1/8,	
8 A/R 7 3	TAPE CHAFFING STRIPS	½ X A/R 3 X A/R	WILL BE IN TOLERANCES DECIMALS: + MIL-P-34 PPP-T-97	INCHES. FRACTIONS; + OR125. 20 TYPE TYPE	OR - 1/8,	
8 A/R 7 3 6 4	TAPE CHAFFING STRIPS TORQUE WASHERS	½ X A/R 3 X A/R TO FIT % BOLTS	WILL BE IN TOLERANCES DECIMALS: + MIL-P-34 PPP-T-97 PPP-P-115 MS-98396	INCHES. FRACTIONS; + OR125. 20 TYPE TYPE	OR - 1/8,  I, CL I, STYLE C IV	
8 A/A 7 3 6 4 5 10	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS	½ X A/R 3 X A/R TO FIT % BOLTS	WILL BE IN TOLERANCES DECIMALS: + MIL-P-34 PPP-T-97 PPP-P-115 MS-98396 FF-W-92	INCHES. FRACTIONS; + OR125.  ZØ TYPE TYPE TYPE TYPE	OR - 1/8,  I, CL I, STYLE C  IV  I, OR EQUAL  A, GR I, CL A	
8 A/R 7 3 6 4 5 10 4 16	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS WASHERS	½ X A/R 3 X A/R TO FIT % BOLTS %	WILL BE IN TOLERANCES DECIMALS: + MIL-P-34 PPP-T-97 PPP-P-11! MS-9839: FF-W-92 FF-W-92	INCHES. FRACTIONS; + OR125.  ZØ TYPE TYPE TYPE TYPE TYPE	I, CL I, STYLE C IV I, OR EQUAL A, GR I, CL A A, GR I, CL A	
8 A/R 7 3 6 4 5 10 4 16 3 16	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS WASHERS LAG BOLTS	12 X A/R 3 X A/R 10 FIT % BOLTS % 14 2½ X ¼	WILL BE IN TOLERANCES DECIMALS: +  MIL-P-34  PPP-T-97  PPP-P-115  MS-9839  FF-W-92  FF-W-92  FF-B-561	INCHES. FRACTIONS: + OR125.  ZØ TYPE TYPE TYPE TYPE TYPE TYPE	I, CL 1, STYLE C IV I, OR EQUAL A, GR I, CL A A, GR I, CL A I, STYLE 1, GR 8	
8 A/R 7 3 6 4 5 10 4 16 3 16 2 2	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS WASHERS	½ X A/R 3 X A/R 10 FIT % BOLTS % ¼ 2½ X ¼ 3½ X %	WILL BE IN TOLERANCES DECIMALS: +  MIL-P-34  PPP-T-97  PPP-P-11:  MS-9839:  FF-W-92  FF-W-92  FF-B-561	INCHES. FRACTIONS: + OR125.  ZØ TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYPE	I, CL 1, STYLE C IV I, OR EQUAL  A, GR I, CL A A, GR I, CL A I, STYLE 1, GR B I, CL 1, STYLE A	
8 A/R 7 3 6 4 5 10 4 16 3 16 2 2 1 2 8 6	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS WASHERS LAG BOLTS BOLTS BOLTS BOLTS BOLTS	½ X A/R 3 X A/R TO FIT % BOLTS % 1/4 2½ X ½ 3½ X % 6 X %	WILL BE IN TOLERANCES DECIMALS: +  MIL-P-34  PPP-T-97  PPP-P-115  MS-9839  FF-W-92  FF-W-92  FF-B-561	INCHES. FRACTIONS; + OR125.  ZØ TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYPE	I, CL I, STYLE C IV I, OR EQUAL  A, GR I, CL A A, GR I, CL A I, STYLE I, GR 8 I, CL I, STYLE A I, CL 1, STYLE A	
8 A/R 7 3 6 4 5 10 4 16 3 16 2 2 1 2 6 6 1 18	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS LAG BOLTS BOLTS BOLTS BOLTS CORNER STRAPS	1/2 X A/R 3 X A/R 10 FIT % BOLTS % 1/4 21/2 X 1/4 31/2 X % 6 X % 12 X 3/4 X .028	WILL BE IN TOLERANCES DECIMALS: + MIL-P-34 PPP-T-97 PPP-P-115 MS-98390 FF-W-92 FF-W-92 FF-B-561 FF-B-564 FF-B-584	INCHES. FRACTIONS; + OR125.  20 TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYPE	I, CL 1, STYLE C IV I, OR EQUAL  A, GR I, CL A A, GR I, CL A I, STYLE 1, GR B I, CL 1, STYLE A	
8 A/R 7 3 6 4 5 10 4 16 3 16 2 2 1 2 6 6 1 16	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS LAG BOLTS BOLTS BOLTS BOLTS BOLTS CORNER STRAPS HOLD DOWN STRAPS	1/2 X A/R 3 X A/R 10 FIT % BOLTS % 1/4 21/2 X 1/4 31/2 X % 81/2 X % 6 X % 12 X % X .028 11/4 X .035 X A/R	WILL BE IN TOLERANCES DECIMALS: +  MIL-P-34 PPP-T-97 PPP-P-11! MS-9839! FF-W-92 FF-W-92 FF-B-561 FF-B-564 FF-B-584 FF-B-584 00-S-761 00-S-781	INCHES. FRACTIONS: + OR125.  ZØ TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYPE	I, CL I, STYLE C IV I, OR EQUAL  A, GR I, CL A A, GR I, CL A I, STYLE I, GR 8 I, CL I, STYLE A I, CL 1, STYLE A	
8 A/R 7 3 6 4 5 10 4 16 3 16 2 2 1 2 6 6 1 18 1 2	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS WASHERS LAG BOLTS BOLTS BOLTS BOLTS BOLTS CORNER STRAPS HOLD DOWN STRAPS BASE SUPPORT (SEE	1/2 X A/R 3 X A/R TO FIT % BOLTS % 1/4 21/2 X 1/4 31/2 X 3/4 31/2 X 3/4 12 X 3/4 X .028 11/4 X .035 X A/R DET.) 22 % X 71/4 X 1/2	WILL BE IN TOLERANCES DECIMALS; +  MIL-P-34  PPP-T-97  PPP-P-115  MS-98396  FF-W-92  FF-W-92  FF-B-561  FF-B-584  FF-B-584  OO-S-781  NN-P-638	INCHES. FRACTIONS; + OR125.  ZØ TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYPE	I, CL 1, STYLE C IV I, OR EQUAL  A, GR I, CL A A, GR I, CL A I, STYLE 1, GR B I, CL 1, STYLE A I, CL 1, STYLE A I, CL 1, STYLE A TYPE II, FIN A YPE I, HVY DUTY, F	
8 A/R 7 3 6 4 5 10 4 16 3 16 2 2 1 2 6 6 1 18 1 2 1 2	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS WASHERS LAG BOLTS BOLTS BOLTS BOLTS BOLTS CORNER STRAPS HOLO DOWN STRAPS BASE SUPPORT (SEE SADDLE SUPPORTS		WILL BE IN TOLERANCES DECIMALS: +  MIL-P-34  PPP-T-97  PPP-P-115  MS-98399  FF-W-92  FF-B-561  FF-B-564  FF-B-584  FF-B-584  OO-S-781  NN-P-538	INCHES. FRACTIONS; + OR125.  ZØ TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYPE	I, CL 1, STYLE C IV I, OR EQUAL  A, GR I, CL A A, GR I, CL A I, STYLE 1, GR B I, CL 1, STYLE A I, CL 1, STYLE A I, CL 1, STYLE A TYPE II, FIN A YPE I, HVY DUTY, F B B B	IN A
8 A/R 7 3 6 4 5 10 4 16 3 16 2 2 1 2 6 6 1 18 3 2 7 1 5 2 6 1	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS WASHERS LAG BOLTS BOLTS BOLTS BOLTS BOLTS CORNER STRAPS HOLD DOWN STRAPS BASE SUPPORT (SEE SAUDLE SUPPORTS BASE	1/2 X A/R 3 X A/R TO FIT % BOLTS % 1/4 2½ X ½ 3½ X % 6 X % 12 X % X .028 1½ X .035 X A/R DET.) 22% X 7½ X ½ 26 X 7½ X % 56 X 26 X ½	WILL BE IN TOLERANCES DECIMALS: +  MIL-P-34 PPP-T-97 PPP-P-11! MS-9839! FF-W-92 FF-B-56! FF-B-584 FF-B-584 GO-S-781 NN-P-530 NN-P-530	INCHES. FRACTIONS; + OR125.  20 TYPE TYPE TYPE TYPE TYPE TYPE TYPE CL 1, CL 1, T GROU GROUE	I, CL 1, STYLE C IV I, OR EQUAL  A, GR I, CL A A, GR I, CL A I, STYLE 1, GR B I, CL 1, STYLE A I, CL 1, STYLE A I, CL 1, STYLE A TYPE II, FIN A YPE I, HVY DUTY, F B B B B	IN A
8 A/R 7 3 6 4 5 10 4 16 3 16 2 2 1 2 1 2 6 6 1 18 3 2 7 1 5 2 6 1	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS WASHERS LAG BOLTS BOLTS BOLTS BOLTS CORNER STRAPS HOLD DOWN STRAPS BASE SUPPORT (SEE BASE SUPPORT (SEE	1/2 X A/R 3 X A/R 10 FIT % BOLTS % 1/4 21/2 X 1/4 31/2 X % 81/2 X % 6 X 3/4 12 X 3/4 X .028 11/4 X .035 X A/R 0ET.) 22% X 71/4 X 1/2 26 X 71/4 X 3/6 56 X 26 X 3/2 0ET.) 2 X 8 (NOM) X 22%	WILL BE IN TOLERANCES DECIMALS: +  MIL-P-34 PPP-T-97 PPP-P-11! MS-9839! FF-W-92 FF-B-56! FF-B-56! FF-B-584 GO-S-781 NN-P-630 NN-P-530 MIL-STD-	INCHES. FRACTIONS; + OR125.  ZØ TYPE TYPE TYPE TYPE TYPE TYPE TYPE CL 1, CL 1, T GROUF GROUF GROUF TYSI CLASS	I, CL 1, STYLE C IV I, OR EQUAL  A, GR I, CL A A, GR I, CL A I, STYLE 1, GR B I, CL 1, STYLE A I, CL 1, STYL	
	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS WASHERS LAG BOLTS BOLTS BOLTS BOLTS BOLTS CORNER STRAPS HOLD DOWN STRAPS BASE SUPPORT (SEE SAUDLE SUPPORTS BASE	1/2 X A/R 3 X A/R TO FIT % BOLTS % 1/4 2½ X ¼ 3½ X % 6 X % 12 X ¾ X .028 1½ X .035 X A/R DET.) 22% X 7¼ X ½ 26 X 7¼ X ½ 26 X 7¼ X ½ 26 X 7¼ X % 56 X 26 X ½ DET.) 2 X 8 (NOM) X 22% 1 2 X 8 (NOM) X 26	WILL BE IN TOLERANCES DECIMALS: +  MIL-P-34 PPP-T-97 PPP-P-115 MS-98396 FF-W-92 FF-W-92 FF-B-561 FF-B-584 GO-S-781 NN-P-538 NN-P-538 MIL-STD- MIL-STD-	INCHES. FRACTIONS; + OR125.  20 TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYPE	I, CL 1, STYLE C IV I, OR EQUAL  A, GR I, CL A A, GR I, CL A I, STYLE 1, GR B I, CL 1, STYLE A IYPE II, FIN A YPE I, HVY DUTY, F B B B B B C B C C C C C C C C C C C C	IN A
8   A/F    7   3   6   4   16   3   16   2   2   1   2   8   6   7   16   3   2   7   1   6   2   5   1   1   3   1   1   1   1   1   1   1	TAPE CHAFFING STRIPS TORQUE WASHERS WASHERS WASHERS LAG BOLTS BOLTS BOLTS BOLTS CORNER STRAPS HOLD DOWN STRAPS BASE SUPPORT (SEE SADDLE SUPPORT (SEE SADDLE (SEE DETAIL	1/2 X A/R 3 X A/R 10 FIT % BOLTS % 1/4 21/2 X 1/4 31/2 X % 81/2 X % 6 X 3/4 12 X 3/4 X .028 11/4 X .035 X A/R 0ET.) 22% X 71/4 X 1/2 26 X 71/4 X 3/6 56 X 26 X 3/2 0ET.) 2 X 8 (NOM) X 22%	WILL BE IN TOLERANCES DECIMALS: +  MIL-P-34 PPP-T-97 PPP-P-11! MS-9839! FF-W-92 FF-B-56! FF-B-56! FF-B-584 GO-S-781 NN-P-630 NN-P-530 MIL-STD-	INCHES. FRACTIONS; + OR125.  20 TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYPE	I, CL 1, STYLE C IV I, OR EQUAL  A, GR I, CL A A, GR I, CL A I, STYLE 1, GR 8 I, CL 1, STYLE A I, CL 1, STYLE A I, CL 1, STYLE A TYPE II, FIN A YPE I, HVY DUTY, F B B B B B C B C C C C C C C C C C C C	IN A

# CODE ID SPI NO. (TPO ) SPECIAL PACKAGING INSTRUCTION 00-195-4810 98747 ITEM NOMENCLATURE SHEET 2 OF 3 CYLINDER, LANDING GEAR NOTES: 1. WRAP CRITICAL AREAS WITH REF-19 AND SECURE WITH REF-18. 2. SECURE REF-6 TO REF-3 AND REF-7 TO REF-4 WITH 8d NAILS.ALSO SECURE REF-9 TO CONTAINER WITH 3d NAILS.ALL NAILS WILL. CONFORM TO FF-N-105, TYPE II, STYLE 4. (-17)TYP. (-8)ITEM REF ≯<sub>4</sub> TYP.

SEE DET. PG. 3(-6)

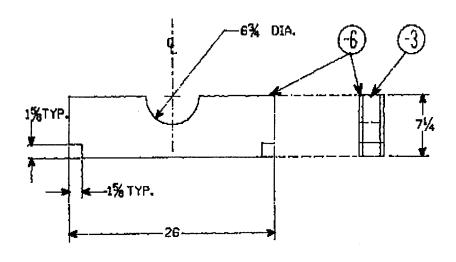
SPI NO. 00-195-4810

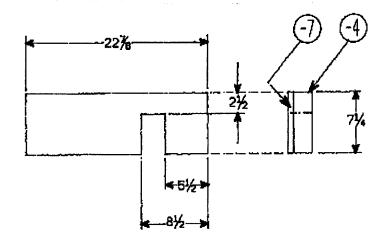
CODE ID

SPI NO. (TPO ) 00-195-4810

ITEM NOMENCLATURE CYLINDER, LANDING GEAR

SHEET 3 OF 3





L_	REVISION:	10					M	ENGIL	NEERING DATA	TIST.		* HICTODY *
DATE:	TE: 23APR03	DATA TECH:	SDA	<u>Q</u>	S ND	ORGN SYMBOL	∥	LGMPM	1	1	APPLICATION: A-10 AIRCRAFT	PAGE 1 OF 1
CAGE: 77751	-	WANUFACTURER NAME: FAIRCHILD INDUSTRIES FARMINGDALE NY	MING	)ALE	\ <u>}</u>		REFI 1904	REFERENCE NR: 19042-1	E NR:	NOUN :	NOUN: PISTON SUBASSY, SHOCK STRUT MLG	
CAGE	E DRAWING NUMBER	NUMBER	122	REV SHE	R N ETS CP	NR NR FURN DIST SHEETS CARDS CODE CODE	RN DIS	ST	NOUN		REQUIREMENTS	
9874	98747 00-ALC/LGMPM.		-	8	0004 0	S 0000	<u>                                     </u>	ENGR	DATA ROMTS (ATTACH A)			:
2775	77751 19040		-	G 0002	1	S 0000	-	PIST	PISTON TUBE - FORGING SH ST, MLG	9		
7775	77751 19041		-	J 0001	1	S 0000	-	PIST	PISTON - MACHINGING SH ST, MLG			
2777	77751 19042		-	ο ο	0001 00	S 0000	-	PIST	PISTON SUBASSY SHOCK STRUT, MLG			
7775	19091		-	D 0001	1	8 0000	-	ADAP	ADAPTER ANTISKID SH ST, MLG			,
7775	77751 19092		\	C 0001	<del></del>	S 0000	-	ADAP	ADAPTER, SUBASSY SH ST, MLG			
3777	17751 19093		-	н 00	0001 00	S 0000	_	BUSHING	ING - MLG			
				-		-	_	-				
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STA	STANDARD ENGINEERING TEXT	NG TEXT			-	1		1	1			
	TO OBTAIN THESE SPECS AND STDS WRITE TO:	SPECS AND STDS	WRITE	TO:	STAN	DARDS	WILL N		FURNISHED.			
	BUILDING 4/SECTION D	ON D										
	700 ROBINS AVE.	סטקם רונסו										
	TELEPHONE: (215) 697-2179	697-2179										
	FAX: (215) 697-1	.462 TO VIE	W OR C	RDER:	HTTP	://www	. DODSS	TO VIEW OR ORDER: HTTP://WWW.DODSSP.DAPS	S.MIL			
Ë	ENGINEEKING DATA LIST KEMARKS	IST REMARKS							FURNISHED METHOD CODE LEGEND:  C - CLASSIFIED DOCUMENT.  S - FURNISHED WITH SOLICITATION.  M - STABLE BASE DRAWING REQUIRED:	DE LEGEND: MENT. SOLICITATION. WING RECUIRED:	X - DATA SUPPLIED (NOT IN EDCARS).  R - FURNISHED BY PCD UPON REQUEST. P - PARTIAL DOCUMENT FURNISHED. V - VENDOR DRAWING.	
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REV			<u> </u>			
KEV	:	.'	ENGINEERING DATA RELL	IREMENTS		
			(ATTACHMENT "A")			
		ONS I/STANDARDS WILL NOT BE FU TIONS ARE FURNISHED FOR THE MA				
PIS	STON SUBASSY-SHO	CK STRUT, MLG	A-10			
2. F	PART NUMBER		3. NATIONAL STOCK N	JMBER		
190	)42-1		1620-01-018-4758			
4.	THE FOLLOWING SPECIFICA	ATIONS/STANDARDS, ETC., WILL BE	USED IN LIEU OF THE DATA INDICATE	D. THE SUPERSEDED DATA WILL NOT BE		
FUR	INISHED UNLESS SO INDICA	ATED.				
5.	Per Drawing requirer AMS 6411.	nents 19040, use Material SA	E AMS-F-7190 in lieu of MIL-	F-7190 and SAE AMS 6411 in lieu of		
6.	• •	nents 19091, use Material SA 5/4 in lieu of QQ-A-225/4.	E AMS -QQ-A-200/11 in lieu of	QQ-A-200/11. Alternate Material, use		
7.	Per Drawing requirer	nents 19093, use Material SA	E AMS 5643 in lieu of AMS 564	<b>1</b> 3.		
8.	Mark & Identify per	MIL-STD-130 in lieu of Z-R	701.			
9.	vibropeened, or steel a location, OO-ALC follows: The serialis digit year of manufar numerous intermitten contract produces me	stamped, in 0.09" letters 0.00/LGHLEN will provide S/N lezation will begin with the CACcture, followed by a dash and at contracts will start serialization.	ocation instructions. Serialization GE of the contractor named on the sequentially unique 3 digit numbers of item with the next numb	16001) Serial number shall be indicated. If the drawing does not indicate in of item shall be accomplished as ne contract, followed by a dash and the 2 inber. A contractor who receives her in sequence of the prior contract. If a it serial numbers. The serial number		
10.	Inspection requirem	ents are as follows:				
	MIL-I-6866 an of "NO DEFE no indications	d MIL-I-25135 with the follow CTS ALLOWED" is that the	wing acceptance/rejection criter inspection is conducted at the reming the inspection shall be cer	B or C, Level 3 or 4) in lieu of ia: NO DEFECTS ALLOWED. The intent equired sensitivity level and there will be tified to Level II with the inspection		
B. Perform Magnetic particle inspection per ASTM E1444 in lieu of MIL-I-6868. Use full wave direct current wet continuous method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS A The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with inspection procedure developed by a Level III as specified in NAS-410.						
11.	Use best shop practi	ices in lieu of the following:				
	A. Machining Spo	ec F-F101.				
	B. Protect Unplat	ed Surfaces Spec Z-P801.				
PRE	PARED BY		SYMBOL	DATE		
	VID H. ARGYLE		LGMPM	14 Apr 03		

REV:	ENGINEERING DATA REQUIREMEN'S CONTINUATION SHEET  (ATTACHMENT "A")
PART NUMBER	NATIONAL STOCK NUMBER
19042-1	1620-01-018-4758

- 12. Heat Treat Steel per SAE AMS-H-6875 in lieu of MIL-H-6875.
- 13. For parts Heat-Treated to 180 KSI and above, any surface that is ground/machined after heat treat, shall be inspected for abusive grinding/machining burns per MIL-STD-867. Grinding shall be per MIL-STD-866.
- 14. Shot Peen per Drawing requirements and SAE AMS -S-13165 in lieu of MIL-S-13165.
- 15. Passivate per SAE AMS-QQ-P-35 or ASTM A967 in lieu of Z-R901, Code SZ.
- 16. Titanium Cadmium Plate per MIL-STD-1500 (Type II, Class 2) on Drawing 19041 and (Type II, Class 3) on Drawing 19093 in lieu of F-T402.
- 17. Finish Paint Scheme as follows in lieu of Z-R901, CODE ZB, ZC, and ZZ.
  - A. Apply one coat Epoxy Waterborne primer per MIL-PRF-85582, Type I, Class 2. Alternate primer, one coat Epoxy-Polamide per MIL-PRF-23377, Type I.
  - B. Apply two topcoats of Polyurethane per MIL-PRF-85285, Type I, color #17925 (White) per FED-STD-595.
- 18. After contract award the successful bidder shall provide a copy of the processing documentation (routing documents and process specifications) to LGHLEN for final review before production begins.
- 19. OO-ALC/LGHLEN system engineering retains all rights to review and accept MRB'S prior to shipment of discrepant items, All deviations, minor and major, from the engineering drawing package will be submitted for MRB disposition.
- 20. Prior to contract award, the contractor will certify to the government in writing, full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/assembly. Contractor is responsible to completely search these manuals, specifications, and standards and fully understand the requirements necessary to manufacture landing gear components. Any questions can be forwarded to this office, OO-ALC/LGHLEN.

PREPARED BY	SYMBOL	DATE
DAVID H. ARGYLE	LGMPM	14 Apr 03
	1	

REV:		TACHMENT "A")
PART NUMBER	NATION	NAL STOCK NUMBER
19042-1	, 1620-	01-018-4758

- 21. Install Bushings per the following in lieu of G-F501:
  - A. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.
  - B. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.
  - C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LGHLEN Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient allow the bushing to reach the same temperature as the coolant.
  - D. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.
  - E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F.Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling oxidation, or corrosion shall be permitted.
  - F. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings.
  - G. Bushings with flanges shall be installed in a similar manner as paragraph (F). Except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange forming a bead. Wipe any excess sealant from the other end of the bushing also.
  - H. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173 prior to bushing installation, and face of lug will be coated with MIL-PRF-81733 per paragraph G.

PREPARED BY	SYMBOL	DATE
DAVID H. ARGYLE	LGMPM	14 Apr 03

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REV:		,	ENGINEERING DA	TA REQUIREMENTS CONTINUATION (ATTACHMENT "A")	SHEET
PART	NUMBER			NATIONAL STOCK NUMBER	
1904	<b>42</b> -1	,		1620-01-018-4758	
22.	and dies/tooling.	· · ·		rging source, using the original cer	
	that the certifie	d dies and proced	lures are available and	ide certification, from the forging s I that the forging source has an agre ney are the successful bidder.	ource, to the Government cement with the detail parts
	SAE AMS-F-71	90 (STEEL). The	detailed part contract	complished as specified on the forgitor shall assure that this has been ac mplishment to the Government.	ng drawing and complished by the forging
23.	FORGING SOURCE	E, CONTROL AN	D LOCATION OF D	IES:	
	1. Forging Drawin	ng:	FAIRCHILD Dra	awing 19040-1	
	2. Die Number:		7017B		
	3. Control of For	ging Process:	Kropp Forge Co	mpany	
	4. Location of Fo	orging Dies:	Kropp Forge Cor A Division of An 5301 W. Rooseve Cicero, IL 60650 Phone: 708-652-	nadite, Inc. elt Road	
PREF	PARED BY			SYMBOL	DATE
D.4	VID U ADOVIE			LCMPM	14 Apr 03

(PL98-525, SECTION 2319)

STOCK NR (NSN): 1620-01-018-4758

NOUN: Piston Subassy, Shock Strut MLG

PART NUMBER (P/N): 19042-1

AIRCRAFT: A-10

#### SECTION C.

## QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 19040 and specification SAE-AMS-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(d) Plating

(PL98-525, SECTION 2319)

STOCK NR (NSN): 1620-01-018-4758

NOUN: Piston Subassy, Shock Strut MLG

PART NUMBER (P/N): <u>19042-1</u>

AIRCRAFT: A-10

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$3000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

## SECTION D.

## QUALIFICATION WAIVER REQUIREMENTS.

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHEL) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHEL reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION.	. 02						- 1			
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DAIE:	[	DATA TECH : SDA	٨	ORGI	ORGN SYMBOL	• •	ĭ 	LGMPM PR NR:		APPLICATION: A-10	PAGE 1 OF 1
98747		MANUFACTURER NAME: OGDEN AIR LOGISTICS CENTER OGDEN	OGDI	NE		5	REFERENCI 9927116-30	REFERENCE NR: 9927116-30	NOUN: CYLINDER ASSEMBLY		;
CAGE	DRAWING NUMBER	NUMBER	REV	NR FURN DIST SHEETS CARDS CODE CODE	CARD	FURN	DIST	NOUN		REQUIREMENTS	10200146/0214
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77751 18795	18795	/	ſL,	0005	0000	ß	10				,
77751 18796	18796	/	٦	1000	0000	ß	10	CYLINDER MACH. SHOCK STRUT N. L.G.			
77751	18797	/	μ,	0001	0000	s	10	CYLINDER SUBASSY.SHK.STRT.N.L.G.			
77751	18825	/	υ	0001	0000	ß	S	SLEEVE STEERING SHK.STRUT N.L.G.			j
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	/93C403						-		200		
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	ENGINEEKING DATA LIST KEMARKS	IST REMARKS						FURNISHED METHOD CODE LEGEND: C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED;	X - X - ON, P - RED; V -	DATA SUPPLIED (NOT IN EDCARS). C FURNISHED BY PCD UPON REQUEST. PARTIAL DOCUMENT FURNISHED. VENDOR DRAWING;	G - GOV'T DOCUMENT. O - OTHERS, CONTRACTOR MUST ACQUIRE.
								FURNISHED WITH CONTRACT AWARD			

REV:	ENGINE	ERING DATA REQUIREMENTS								
		(ATTACHMENT "A")								
	ONS I/STANDARDS WILL NOT BE FURNISHED IN									
SHOCK STRUT ASSY-1	IONS ARE FURNISHED FOR THE MANUFACTURE	A-10								
	OSE LANDING GEAR									
2. PART NUMBER		3. NATIONAL STOCK NUMBER								
9927116-30		1620-01-467-6214								
4. THE FOLLOWING SPECIFICATION FURNISHED UNLESS SO INDICATION	ATIONS/STANDARDS, ETC., WILL BE USED IN LIE ATED.	U OF THE DATA INDICATED. THE SUPERS	EDED DATA WILL NOT BE							
5. Use Material SAE AN	1S-QQ-A-200/1 in lieu of QQ-A-357 (C/	ANCELLED), DRAWING 18795.								
6. Use Material SAE AN	1S 5643 in lieu of AMS 5643, DRAWIN	NGS 18832 & 18825.								
7. Mark and Identify per	notes 2, 3, & 4(DWG. 9927116) in lieu	of Z-R701, Code RS, and Z-J901								
vibropeened, or steel a location, OO-ALC/ follows: The serializ digit year of manufact numerous intermitten contract produces mo	8. For large assemblies and components utilize the following statement in lieu of PS 16001) Serial number shall be vibropeened, or steel stamped, in 0.09" letters 0.004"-0.007" deep in the location indicated. If the drawing does not indicate a location, OO-ALC/LGHLEN will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract, followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-01-003."									
O. Inspection requirements are as follows:										
MIL-I-6866. Th inspector perform	A. Perform fluorescent penetrant inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of MIL-I-6866. This part shall conform to Grade A quality level classification as specified in MIL-STD-1907. The inspector performing the inspection will be Level II certified with the inspection procedure developed by a Level III as specified in NAS-410.									
current (FWDC as specified in I	B. Perform Magnetic Particle inspection per ASTM E 1444, in lieu of MIL-I-6868, fluorescent type, full wave direct current (FWDC), wet continuous method. This part shall conform to classification G rade A quality level classification as specified in MIL-STD-1907. The inspector performing the inspection will be certified to the Level II with the inspection procedure developed by a Level III as specified in NAS-410.									
	the successful bidder shall provide a cops) to LGHLEN for final review before p		(routing documents and							
	em engineering retains all rights to revie or and major, from the engineering drawi		-							
specifications, and component/assembl	vard, the contractor will certify to the government standards called out and required for the y. Contractor is responsible to complete direments necessary to manufacture landing.	manufacture of this contracted landly search these manuals, specification	ding gear ons, and standards and fully							
PREPARED BY		SYMBOL	DATE							
DAVID H. ARGYLE		LGMPM	20 May 03							

REV:	ENGINEERING DA	TA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")
PART NUMBER		NATIONAL STOCK NUMBER
9927116-30	,	1620-01-467-6214

- 13. Install Bushings per the following in lieu of F-501.
  - A. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.
  - B. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.
  - C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILE Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.
  - D. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.
  - E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F.Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling oxidation, or corrosion shall be permitted.
  - F. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings.
  - G. Bushings with flanges shall be installed in a similar manner as paragraph (F). Except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange forming a bead. Wipe any excess sealant from the other end of the bushing also.
  - H. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173 prior to bushing installation, and face of lug will be coated with MIL-PRF-81733 per paragraph G.

PREPARED BY	SYMBOL	DATE
DAVID H. ARGYLE	LGMPM	20 May 03

		<del>-</del> 1
REV:	ENGINEERING DATA REQUIREM (ATTACHI	ME
		OCK NUMBER
PART NUMBER	1620-01-46	
9927116-30	1020-01-40	7-6214
14. The required forgings will be proceed and dies/tooling.	ured from the qualified forging source	using the original certified forging procedures
that the certified dies and pro		ication, from the forging source, to the Government ing source has an agreement with the detail he successful bidder.
SAE AMS-A-22771 for alu	minum forgings. The detailed part con	d as specified on the forging drawing and attractor shall assure that this has been umentation of accomplishment to the Government.
15. FORGING SOURCE, CONTROL	AND LOCATION OF DIES:	
A. Forging drawing: Die number:	9927116-03 11795.51	
B. Control of forging process:	U. S.A.F.	
C. Location of forging dies:	Weber Metals Inc. 6706 South Garfield Paramount, California 90723 (562) 602-0260	
16. INSTRUCTIONS FOR QUALIFIC	CATION OF NEW FORGING SOUR	CE.
new forging dies and the propose without the express consent of the use of the dies developed under	actor will advise the government in wrold forging source. The contractor will me government procuring agency. The this contract. The contractor will inform its is placed, that the government has use Contracting Officer.	not proceed to obtain new dies government will have unlimited m the forging house in writing, at
PREPARED BY	SYMBOL	DATE

LGMPM

20 May 03

DAVID H. ARGYLE

(PL98-525, SECTION 2319)

 STOCK NR (NSN): 1620-01-467-6214
 PART NUMBER (P/N): 9927116-30

 NOUN: Shock Strut Assy- Nose Landing Gear
 AIRCRAFT: A-10

## SECTION C

## QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N \_9927116 and specification SAE-AMS-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(d) Plating

(PL98-525, SECTION 2319)

STOCK NR (NSN): 1620-01-467-6214

PART NUMBER (P/N): 9927116-30

NOUN: Shock Strut Assy- Nose Landing Gear

AIRCRAFT: A-10

## 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$3000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

## SECTION D

## QUALIFICATION WAIVER REQUIREMENTS.

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHEL) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHEL reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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	APPLICATION: A-10	NOUN: PISTON TUBE LANDING	REGUIREMENTS																			: X - DATA SUPPLIED (NOT IN EDCARS) R - FURNISHED BY PCD UPON REQUEST ION. P - PARTIAL DOCUMENT FURNISHED. IRED; V - VENDOR DRAWING,
ERING DATA LIS	LGMPM PR NR:	נו	NOUN	PISTON TUBE SHOCK STRUT N.L.G.																	•	FURNISHED METHOD CODE LEGEND: C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED;
ENGINI		REFERENCE NR: 18805-1	TDIST																			
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REVISION:	''	MANUFACTURER NAME NORTHROP GRUMMAN	DRAWING NUMBER	3805																STANDARD ENGINEERING TEXT		ENGINEERING DATA LIST REMARKS
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00-ALC		(ATTACHMENT "A")							
NOTE: MILITARY SPECIFICATION	ONS I/STANDARDS WILL NOT BE FURNISHED IN TIONS ARE FURNISHED FOR THE MANUFACTURE	THE BID SET. OF							
	STRUT (NOSE LANDING GEAR)	A-10							
2. PART NUMBER		3. NATIONAL STOCK NUMBER							
18805-1		1620-01-012-1969							
4. THE FOLLOWING SPECIFICATION FURNISHED UNLESS SO INDICATION	ITIONS/STANDARDS, ETC., WILL BE USED IN LIE ATED.	J OF THE DATA INDICATED. THE SUPERS	EDED DATA WILL NOT BE						
	IS 6257 in lieu of MIL-S-8844 (CANCE	LLED).							
6. Grind per MIL-STD-	866 and nital etch for burns per MIL-ST	D-867 in lieu of F-F101.							
7. Heat Treat per SAE A	MS-H-6875 in lieu of MIL-H-6875.								
8. Shot Peen per SAE Al	MS-S-13165 in lieu of MIL-S-13165.								
9. Inspection requirement	nts are as follows:								
wet continuous ALLOWED. sensitivity level	A. Perform Magnetic particle inspection per ASTM E1444 in lieu of MIL-I-6868. Use full wave direct current (FWDC), wet continuous method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410.								
10. Chrome Plate per M	Chrome Plate per MIL-STD-1501 (Class 2, Type 1) in lieu of SAE AMS-QQ-C-320.								
	Protect unplated surfaces, using temporary coatings as required to prevent damage or deterioration during handling, per MIL-C-16173 in lieu of R-Z901, CODE ZZ.								
12. Identification and M	Identification and Marking per MIL-STD-130 in lieu of Z-R701.								
13. Serialization of item	Serialization of items shall be accomplised as follows:								
indicate a locati The serialization followed by a d A contractor where the sequence of the	A. "Serial number shall be vibropeened in 0.09" letters, .004 to .007" deep in the location indicated. If the drawing does not indicate a location, LILE will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the letters "S/N" followed by the CAGE of the contractor named on the contract, followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-02-001."								
	I the successful bidder shall provide a cop ns) to LILE for final review before produ		(routing documents and						
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PREPARED BY		SYMBOL	DATE						
DAVID H. ARGYLE		LGMPM	3 May 02						
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		ATTACHMENT AT	
PART NUMBER		NATIONAL STOCK NUMBER	
18805-1	,	1620-01-012-1969	
	tem engineering retains all rights to review or and major, from the engineering drawin		
specifications, and component/assemb	ward, the contractor will certify to the governments alled out and required for the sly. Contractor is responsible to completel uirements necessary to manufacture landial.	manufacture of this contracted land y search these manuals, specification	ding gear ons, and standards and fully
PREPARED BY		SYMBOL	DATE
DAVID H. ARGYLE		LGMPM	3 May 02

PAGE 2 OF 2

# SOURCE QUALIFICATION REQUIREMENTS (PL 98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-012-1969 NOUN: Piston tube PART NUMBER (P/N) 18805-1 AIRCRAFT: A-10 NLG

#### SECTION C

## QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE

- 1. Because of the need for uninterrupted item support to military aircraft systems and in keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offerer an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offerer.
- 2. The offerer must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The required materials will be procured from a qualified source and will meet the requirements of their respective specifications. The offerer will assure that the material supplier has accomplished this and will submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
- 4. The qualification article shall demonstrate full compatibility and comparability with existing parts, and once submitted, will be subjected to such testing as deemed necessary by the government, to insure the article meets all dimensional, processing, and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article, no matter what its condition, shall be returned to the contractor or disposed of at his discretion and direction, whether it was found acceptable or not.
- 5. Form verification: The Government's Quality Verification Center will verify compliance with dimensional data requirements. Material and process compliance will also be verified as required.
- 6. Fit/function verification: Existing components and Government test stands/fixtures will be utilized to verify physical interface and functional performance of articles.
- 7. Testing for material and process compliance

(a) Material analysis

(d) Plating

(b) Heat treat

(e) Finish

(c) Grinding

(f) Other

### 8. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Test requirements outside organic capabilities will be contracted out to independent laboratories.
- 9. The estimated cost of government testing and evaluation is \$2000
- 10. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

# SOURCE QUALIFICATION REQUIREMENTS (PL 98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-012-1969 NOUN: Piston tube\_\_\_\_

PART NUMBER (P/N) 18805-1 AIRCRAFT: A-10 NLG

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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76301		BOEING CO/MC DONNELL ACFT			ŀ		88A4	REFERENCE NR: 68A450602-1001	NOUN: NOUN: CYLINDER, LANDING GE	
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7630	76301 MMS1304	/		0000	0000 0	S 00	_	MATERIAL SPECIFICATION	DATA AVAILABLE AT WR-ALC.	
7630	76301 PS20018	/		0000	0000	8 00	-	SURFACE FINISH OF HOLES	DATA AVAILABLE AT WR-ALC.	
7630	76301 PS23007	/	$\vdash$	0000	0000	s 00	-	PROCESS SPECIFICATION	DATA AVAILABLE AT WR-ALC	1
7630	76301 PS23041	,		0000	0000	s 00		BREAK SHARP EDGES	DATA AVAILABLE AT WR-ALC.	
7630	76301 ST4M130	\	_	0000	0000	s 00	_	BUSHING	DATA AVAILABLE AT WR-ALC.	
7630	76301 4M139	/	_	0000	0000	S 00		BUSHING	DATA AVAILABLE AT WR-ALC.	
7630		/	٦	0004	0000	s 00		CYLINDER ASSEMBLY, NLG	DATA AVAILABLE AT WR-ALC.	
7630	76301 68A450631 W/PL	/	O	0000	0000	S 00	_	BUSHING, TRUNNION, NLG	DATA AVAILABLE AT WR-ALC.	
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								M - STABLE BASE DRAI		ΛΕ. -

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4. THE FOLLOWING SPECIFICATIONS/STA	NDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. T	HE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS	SO INDICATED.							
REVIEW BOARD (MRB	EM ENGINEERING RETAINS ALL RI ) DISPOSITIONS PRIOR TO SHIPMEI HE ENGINEERING DRAWING PACK	NT OF DISCREPANT ITEM. AL	L DEVIATIONS, MINOR							
FULL COMPLIANCE W THE MANUFACTURE OR RESPONSIBLE TO COM UNDERSTAND THE RE	ACT AWARD, THE CONTRACTOR SIZE ITH MANUALS, SPECIFICATIONS, OF THIS CONTRACTED LANDING OF THE SEARCH THESE MANUAL EQUIREMENTS NECESSARY TO MAIORWARDED TO THE OFFICE OF OCC	AND STANDARDS CALLED OU BEAR COMPONENT/ASSEMBLY LS, SPECIFICATIONS, AND ST NUFACTURE LANDING GEAR	T AND REQUIRED FOR CONTRACTOR IS ANDARDS AND FULLY							
	AWARD, THE SUCCESSFUL BIDDE DUTING DOCUMENTS AND PROCES BEGINS.									
8. IDENTIFICATION A	ND MARKING PER MIL-STD-130 AS	AN ALTERNATE TO PS 16001.								
VIBROPEENED (WITH LOCATION INDICATED S/N LOCATION INSTRUSERIALIZATION SHALL FOLLOWED BY A DASSEQUENTIALLY UNIQUENTRACTS SHALL STOOMTRACT. IF A CONTRACT.	9. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004"-0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE (FSCM) OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-02-001.									
10. DIMENSIONS AND	10. DIMENSIONS AND TOLERANCES PER ASME Y14.5 IN LIEU OF USASI Y14.5 AND ANSI Y14.5.									
11. THREADS PER MIL-S-8879 (SAFETY CRITICAL).										
OR 4 IN LIEU OF PS212 ALLOWED. THE INTE REQUIRED SENSITIVIT PERFORMING THE INS	SCENT PENERTRANT INSPECTION 102 WITH THE FOLLOWING ACCEPT INT OF NO DEFECTS ALLOWED IS TO SELECT AND THERE SHALL BE NESPECTION SHALL BE VERTIFIED TO VEL III AS SPECIFIED IN NAS-410.	FANCE/REJECTION CRITERIA: THAT THE INSPECTION IS CON TO INDICATIONS ALLOWED. T	NO DEFECTS IDUCTED AT THE THE INSPECTOR							
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PREPARED BY DENISE S. BISHOP		SYMBOL LGMPM	DATE 5 Jun 02							
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13. ULTRASONIC INSP	ECTION PER MIL-STD-2154 IN LIEU	OF MIL-I-8950.							
14. MATERIAL: CRES	17-4PH PER SAE AMS 5643 IN LIEU	OF AMS 5643. (DWG 68A450631	1)						
15. SHOT PEEN PER SA	AE AMS-S-13165 MAY BE USED AS A	AN ALTERNATE TO PS 14023.							
16. HEAT TREAT PER	SAE AMS-H-6875 AS AN ALTERNAT	TE TO PS 15227.							
17. PASSIVATE PER SA	AE AMS-QQ-P-35 OR ASTM A967 MA	Y BE USED AS AN ALTERNAT	E TO PS13001.						
18. ANODIZE PER MIL	-A-8625, TYPE II, CLASS I MAY BE	USED AS AN ALTERNATE TO I	PS 13201.						
19. HARD COAT PER M 13208.	AIL-A-8625, TYPE III, CLASS 2 (*BLA	ACK #37038") MAY BE USED AS	AN ALTERNATE TO PS						
COAT OF EPOXY POLY PER MIL-PRF-85285, T	EPOXY WATERBORNE PRIMER PEI YAMIDE PRIMER PER MIL-PRF-2337 YPE I, COLOR NUMBER 17925 (WHI B77B, MMS420 AND PS 13646.	7, TYPE I. APPLY TWO TOPCO	OATS POLYURETHANE						
21. INSTALL BUSHING	S PER THE FOLLOWING AS AN ALT	TERNATE TO PS17034:							
A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.									
	ING INSTALLATION, THE PARTS A TO REMOVE ALL CONTAMINATION		CLEANED WITH						
C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LILEC ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.									
COOLANT WITH AN A	SHALL BE INSTALLED INTO THE HOBSOLUTE MINIMUM OF LOST TIME MIZE INSTALLATION TIME WHICH	E. TRIAL RUNS SHALL BE ACC	COMPLISHED AS						
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PREPARED BY	·								
DENISE S. BISHOP		SYMBOL	DATE						
DEMISE S. BISHUP		LGMPM	5 Jun 02						

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INSTALLED, IN ADDIT NOT HAVE PAINT OR SHALL BE HEATED BY LAMPS ETC.; TO THE BE USED TO MONITOI MAXIMUM TEMPERA	IONALLY BE NECESSARY TO HEAT FION TO SUB-ZERO COOLING OF THE SEALANT OR OTHER ORGANIC MAY THE USE OF RADIANT HEAT TEC MAXIMUM TEMPERATURE OF 250 R HEAT AND SHALL BE LOCATED OF FURE. NO SCALING, OXIDATION, O	HE BUSHING. DETAIL PARTS INTERIAL APPLIED PRIOR TO HE HISTORY OF THE PART EXPERIES OF CORROSION SHALL BE PER	N PROCESS, WHICH DO EATING, THE PARTS BLANKETS, INFRARED URING DEVICES SHALL CTED TO REACH MITTED.							
LIGHT COAT OF SEAL	HOUT FLANGES SHALL BE INSTALI ANT PER MIL-S-81733. INSTALL SF HAVE EXTRUDED AROUND THE P	IRUNKEN BUSHING AND WIPE	OFF ANY EXCESS							
SEALANT SHALL ALS A MANNER AS TO EN INSTALLED. WIPE OF	H FLANGES SHALL BE INSTALLED O BE APPLIED TO FACE OR LUG UI SURE COMPLETE COVERAGE OF IN F ANY EXCESS SEALANT AROUND ALANT FROM OTHER END OF BUS	NDER FLANGE. SEALANT SHA ISIDE FACE OF BUSHING FLAN PERIPHERY OF BUSHING FLA	LL BE APPLIED IN SUCH							
	WITH EXTERNAL GREASE GROOV BUSHING INSTALLATION AND FA									
22. FOR DRAWING CL	ARIFICATION THE FOLLOWING AP	PLIES:								
A. THE .625 INCH LUG LENGTH SHOULD BE A (TYPICAL) ALSO APPLYING TO THE MATING LUG (SHEET 1, ZONE C9).										
23. USE MIL-STD-1537	AS AN ALTERNATE TO MMS-141.									
	DRAWINGS ARE NOT REQUIRED FO AND FINISH SPECIFICATION 68A900		EM: 40M114, 40M129,							
25. FORGING REQUIR	EMENTS:									
	SHALL BE PROCURED FROM THE C PROCEDURES AND DIES/TOOLING.	· · · · · · · · · · · · · · · · · · ·	USING THE ORIGINAL							
FROM THE FORGING : AVAILABLE AND THE	ONTRACT AWARD, THE DETAILED SOURCE, TO THE GOVERNMENT TI FORGING SOURCE HAS AN AGREE USE IN THE EVENT THEY ARE TH	HAT THE CERTIFIED DIES AND EMENT WITH THE DETAIL PAR	PROCEDURES ARE							
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ON THE FORGING DRA ALUMINUM FORGING	ODUCTION, FORGING LOT QUALAWING AND SAE AMS-F-7190 FOR S. THE DETAILED PART CONTRAHE FORGING SOURCE AND SHALLOTHE GOVERNMENT.	STEEL FORGINGS AND SAE AN CTOR SHALL ASSURE THAT TI	AS-A-22771 FOR HIS HAS BEEN
B. FORGING SOUR	CE, CONTROL AND LOCATION:		
1. FORGING DE	RAWING: 68A450602-2001		
2. CONTROL O	F FORGING PROCESS: MCDONNE	LL	
3. LOCATION (	OF FORGING DIES: WEBER META 16706 S. GAR PARAMOUNT PHONE: (562	FIELD C, CA 90723	
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NOT PROCEED TO OBT GOVERNMENT-PROCU DEVELOPED UNDER T AT THE SAME TIME O	NEW FORGING DIES WITHOUT IN NEW FORGING DIES WITHOUT IN NEW FORGING DIES WITHOUT IN THE GOVERNM THIS CONTRACT. THE CONTRACT IS THE ORDER FOR THE DIES IS PAND FORWARD A COPY OF THIS IS AND FORWARD A COPY OF THIS IS AND THE DIES IS PAND FORWARD A COPY OF THIS IS AND THE DIES IS AND THE D	JT THE EXPRESS WRITTEN CO ENT SHALL HAVE UNLIMITED OR SHALL INFORM THE FORG ACED, THAT THE GOVERNME	NSENT OF THE USE OF THE DIES ING HOUSE IN WRITING, NT HAS UNLIMITED USE CONTRACTING
DENISE S. BISHOP			DATE
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(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-310-9830

PART NUMBER (P/N)68A450602-1001

NOUN: Cylinder Assembly, Nose Landing Gear

AIRCRAFT:F-15

#### SECTION C

#### QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>68A450602-2001</u> and specification <u>MIL-A-22771</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.
  - (a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(d) Plating

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-310-9830

PART NUMBER (P/N)68A450602-1001

NOUN: Cylinder Assembly, Nose Landing Gear

AIRCRAFT:F-15

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$3000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION:	02						Eì	NGINEERING	DATA	LIST			* HISTORY *	
ATE	: 24JUN03	DATA TECH:	SD	A	ORGN	SYME	OL:	*****	LGMPM	PR NR :		ľ	APPLICATION: F15 ACFT	PAGE 1	OF I
AGE: 76301		RER NAME: MC DONNELL A	CFT						RENCE NR: 10702-1006		NOT CY		LANDING GE	NSN : 16200107535	62
CAGE	DRAWING N	UMBER		REV	NR SHEETS	NR CARDS		DIST					REQUIREMENTS		
8747	00-alc/lgmpm		/	Α	0004	0000	s	П	ENG. DATA ROMNIS. (ATTA	CH. "A")					
6301	PS 15063		1	H	0009	0000	s		PROCESS SPECIFICATION		OBTAIN DATA	FROM WR	r-ALC (JEDMICS)		
6301	PS 20018		1	3	0005	0000	s		PROCESS SPECIFICATION		OBTAIN DATA	FROM WR	-ALC (JEDMICS)		
6301	PS 23041		1	R	0023	0000	8		PROCESS SPECIFICATION		OBTAIN DATA	FROM WR	R-ALC (JEDMICS)	· · · · · · · · · · · · · · · · · · ·	
6301	ST4M130		7	λU	0000	0000	s		BUSHING, SLEEVE-FLANGE	SPECIAL	OBTAIN DATA	FROM WR	-ALC (JEDMICS)		
6301	68A410602 WITH P	/L	1	D	0003	0000	s		CYLINDER ASSY M. L.G.	FORGING	OBTAIN DATA	FROM WR	-ALC (JEDMICS)	<del></del>	
6301	68A410670 WITH P	/L	1		0001	0000	s	Г	BUSHING, OTR. CYLNDR. LUX	G-M.L.G.	OBTAIN DATA	FROM WR	-ALC (JEDMICS)	· · · · · · · · · · · · · · · · · · ·	
6301	68A410702 WITH P	/L	1	G	0003	0000	S		CYLINDER ASSEMBLY-MAIN	LND. GEAR	OBTAIN DATA	FROM WR	-ALC (JEDMICS)		
5301	58A410720 WITH P	'L	/	В	0001	0000	s		BUSHING TRUNNION PIN-M	.L.G.	OBTAIN DATA	FROM NR	-ALC (JEDMICS)		
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TANE	ARD ENGINEERIN	G TEXT						•						*****	
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									M - STABLE	ED WITH SO BASE DRAWI	LICITATION. NG REQUIRED:	P - ; V -	FURNISHED BY PCD UPON RE PARTIAL DOCUMENT FURNISH VENDOR DRAWING; (NOT PROVIDED)		JIRB.

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A CONTRIBUTION OF STANDARDS WILL NOT BE FURNISHED IN THE BIO SET.  1. THE FOLLOWING BISTROCKINGS ARE FURNISHED FOR THE MANCACTURE OF CYLINDER ASSEMBLY-MAIN LANDING GEAR  2. FART NUMBER 68A410702-1006  3. NATIORAL STOCK NUMBER 68A410702-1006  4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPPRESEDED DATA WILL NOT BE PRIMININGHOUNG LESS SO INDICATED.  5. Use Material SAE AMS 6419 in lieu of AMS 6419, (Drawing 68A410602).  6. Use Material SAE AMS 5629 in lieu of AMS 6429, (Drawing 68A410670).  7. Use Material SAE AMS 4640 in lieu of AMS 4640. Alternate Material use SAE AMS 4590 in lieu of AMS 4590. (Drawing 68A410720).  8. Use Material SAE AMS 6400 in lieu of QC-C-330, (Drawing 68A410720, Note 15).  9. Inspection requirements are as follows:  A. Perform fluorescent penetrant inspection in lieu of PS 21202, per ASTM E1417, Type 1, Method B or C. Level 3 or 4 with the following acceptance/rejection criteria: NO DEFECTS ALLOWED: the intent of "NO DEFECTS ALLOWED" is that the inspection procedures developed by a Level III as specified in NAS 410.  8. Perform Magnetic particle inspection per ASTM E1444, in lieu of PS 21201. Use full wave direct current (FWDC), continuous method, flouorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. To intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there be no indications allowed. The inspector performing the inspection is conducted at the required sensitivity level and there be no indications allowed. The inspector performing the inspection is conducted at the required sensitivity level and there be no indications allowed. The inspector performing the inspection is conducted at the required sensitivity level and there be no indications and one of the particle inspection in the inspection in inspection in intention of them shall be accomplished as follows:  A. Serial number shall be vibroppeened, or steel stamped, in 0.09° letters 0.004°-0.007° d	REV:		<del></del>	
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF CYLINDER ASSEMBLY-MAIN LANDING GEAR 2. PART NUMBER 68A410702-1006 3. NATIONAL STOCK NUMBER 1620-01-075-3562 4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., VILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FUNNISHED LINK ESS 50 INDICATED. 5. Use Material SAE AMS 6419 in lieu of AMS 6419, (Drawing 68A410602). 6. Use Material SAE AMS 5629 in lieu of AMS 6459, (Drawing 68A410670). 7. Use Material SAE AMS 6400 in lieu of AMS 4640. Alternate Material use SAE AMS 4590 in lieu of AMS 4590. (Drawing 68A410720). 8. Use Material ASTM B196 in lieu of QQ-C-530, (Drawing 68A410720, Note 15). 9. Inspection requirements are as follows: A. Perform fluorescent penetrant inspection in lieu of PS 21202, per ASTM E1417, Type 1, Method B or C. Level 3 or 4 with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of 'NO DEFECTS ALLOWED' is that the inspection is conducted at the required sensitivity level and there will be no indications allow The inspector performing the inspection procedures developed by a Level III as specified in NAS 410.  8. Perform Magnetic particle inspection per ASTM E1444, in lieu of PS 21201. Use full wave direct current (FWDC), continuous method, flouorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. To intent of 'NO DEFECTS ALLOWED' is that the inspection is conducted at the required sensitivity level and there be no indications allowed. The inspector performing the inspection will be certified to Level II with the inspection procedures developed by a Level III as specified in NAS 410.  10. Mark & Identify per MIL-STD-130, as an alternate to PS 16001 per drawing requirements.  11. Serialization of item shall be vibropeened, or steel stamped, in 0.09" letters 0.004*-0.007" deep in the location indicated, the drawing does not indicate a location, OO-ALC/ILLE will provide S/N location instructions. Serialization of the shall be accomplished as follows: The st		ENGINE		
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A. Perform fluorescent penetrant inspection in lieu of PS 21202, per ASTM E1417, Type 1, Method B or C. Level 3 or 4 with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there will be no indications allow The inspector performing the inspection will be certified to Level II with the inspection procedures developed by a Level III as specified in NAS 410.  B. Perform Magnetic particle inspection per ASTM E1444, in lieu of PS 21201. Use full wave direct current (FWDC), continuous method, flouorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. To intent of "NO DEFECTS ALLOWED." In the procedure of the procedure developed by a Level III as specified in NAS 410.  10. Mark & Identify per MIL-STD-130, as an alternate to PS 16001 per drawing requirements.  11. Serialization of item shall be accomplished as follows:  A. Serial number shall be vibropeened, or steel stamped, in 0.09" letters 0.004"-0.007" deep in the location indicated the drawing does not indicate a location, OO-ALC/ILIE will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-95-001."	8. Use Material ASTM I	3196 in lieu of QQ-C-530, (Drawing 68	3A410720, Note 15).	
with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there will be no indications allow The inspector performing the inspection will be certified to Level II with the inspection procedures developed by a Level III as specified in NAS 410.  B. Perform Magnetic particle inspection per ASTM E1444, in lieu of PS 21201. Use full wave direct current (FWDC), continuous method, flouorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. To intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there were be no indications allowed. The inspector performing the inspection will be certified to Level II with the inspection procedures developed by a Level III as specified in NAS 410.  10. Mark & Identify per MIL-STD-130, as an alternate to PS 16001 per drawing requirements.  11. Serialization of item shall be accomplished as follows:  A. Serial number shall be vibropeened, or steel stamped, in 0.09" letters 0.004"-0.007" deep in the location indicated, the drawing does not indicate a location, OO-ALC/LILE will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-95-001."	9. Inspection requirement	its are as follows:		
A. Serial number shall be vibropeened, or steel stamped, in 0.09" letters 0.004"-0.007" deep in the location indicated. the drawing does not indicate a location, OO-ALC/LILE will provide S/N location instructions. Serialization of iten shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-95-001."  PREPARED BY  SYMBOL  DATE	ALLOWED" is the The inspector per Level III as specifically as specifically as specifically as a specifically aspecifically as a specifically as a specifically as a specifically as a specifica	nat the inspection is conducted at the required forming the inspection will be certified ited in NAS 410.  The particle inspection per ASTM E1444, d., flouorescent type with the following EFECTS ALLOWED" is that the inspectallowed. The inspector performing the oped by a Level III as specified in NAS	to Level II with the inspection product in lieu of PS 21201. Use full wave acceptance/rejection criteria: NO D tion is conducted at the required se inspection will be certified to Leve 410.	ll be no indications allowed. cedures developed by a  direct current (FWDC), wet DEFECTS ALLOWED. The Instituty level and there will
A. Serial number shall be vibropeened, or steel stamped, in 0.09" letters 0.004"-0.007" deep in the location indicated. the drawing does not indicate a location, OO-ALC/LILE will provide S/N location instructions. Serialization of iten shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-95-001."  PREPARED BY  SYMBOL  DATE	11. Serialization of item	shall be accomplished as follows:		en e
- I was a second of the second	A. Serial number shall be accompled followed by a decontractor who a sequence of the	hall be vibropeened, or steel stamped, in so not indicate a location, OO-ALC/LILE lished as follows: The serialization will lish and the 2 digit year of manufacture, receives numerous intermittent contracts prior contract. If a contract produces more	E will provide S/N location instruct begin with the CAGE of the contract followed by a dash and a sequential will start serialization of item with one than 999 items, the serial number	ions. Serialization of item ctor named on the contract, lly unique 3 digit number. An the next number in
DAVID H. ARGYLE LGMPM 13 Mar 03	PREPARED BY		SYMBOL	DATE
	DAVID H. ARGYLE		LGMPM	13 Mar 03

	ENGINI	EERING DATA REQUIREMENTS CONTINUATION	SHEET
A		(ATTACHMENT "A")	
ART NUMBER	· · · · · · · · · · · · · · · · · · ·	NATIONAL STOCK NUMBER	
8A410702-1006		1620-01-075-3562	
<ol><li>Heat Treat per SAE Al (Note 16).</li></ol>	MS-H-6875 as an alternate to	PS 15296. Drawing 68A410702(Note 14) a	and Drawing 68A410602
3. Heat Treat per SAE Al	MS-H-6875 as an alternate to	PS 15238, Drawing 68A410670(Note 6).	
4. Heat Treat per SAE A	MS-H-7199 as an alternate to	PS 15935, Drawing 68A410720(Note 15).	the second second
	er MIL-STD-867 as an altern (Note 19), and (Note XI, Fo	nate to PS 21205 & PS 23006. Drawing 68A orging Notes).	410702(Note 17),
6. Shot Peen per SAE AN (Note 23).	MS-S-13165 as an alternate to	PS 14023. Drawing 68A410702(Note 23) a	and Drawing 68A410602
7. Passivate per SAE AM	IS-QQ-P-35, ASTM A967(Ty	pe 5) as an alterenate to PS 13001. Drawing	g 68A410670(Note 9).
8. Forging Cleanliness pe	er SAE AMS 2300 in lieu of A	AMS 2300. Drawing 68A410602 (Note 10).	
9. Chromium Plate per M Drawing 68A410602(		3) as an alternate to PS 13102. Drawing 68	A410702(Notes 26 & 28) ar
0. Low Embrittlement Ca 68A410702, NOTE I		370 (Type II, Class 1) as an alternate to PS 1	3144. Drawing
1. Low Embrittlement Ca 68AA410602, NOTE	ndmium Plate per MIL-STD-8 35.	370 (Type I, Class 2) as an alternate to PS	13144. Drawing
2. Finish Specification 68	3A900000 is not required and	will not be furnished. Finish per the follow	ing in lieu of PS 13646:
	poxy Waterborne primer per per MIL-PRF-23377, Type I	MIL-PRF-85582, Type I, Class 2. Alternate	primer, one coat
B. Apply two topcoat	ts of Polyurethane per MIL-l	PRF-85285, Type I, color #17925 (White) p	er FED-STD-595.
		s to review and accept MRB'S prior to ships ering drawing package will be submitted for	
specifications, and sta component/assembly.	andards called out and require Contractor is responsible to e ements necessary to manufact	to the government in writing, full compliance ed for the manufacture of this contracted land completely search these manuals, specification ture landing gear components. Any questions	ding gear ons, and standards and fully
onto oo abolelel	<b>~.</b>		

REV:	EN	GINEERING DATA REQUIREMENTS CONTINUATION (ATTACHMENT "A")	I SHEET
PART NUMBER	,	NATIONAL STOCK NUMBER	
68A410702-1006		1620-01-075-3562	

- 25. Install Bushings per the following, as an alternate to PS 17034:
  - A. The bushing installations shall be accomplished in such a manneras to avoid damageto the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forcedinstallation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. Asmall non-metallic hammer maybe used to tap the bushing into alignment with the housing bore, or to seat the bushing.
  - B. Priorto bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.
  - C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILE Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.
  - D. The bushing shall be installed into the housing immediately upon removal from the coolant withan absolute minimum of lost time. Trialruns shall be accomplished as necessary to minimizenstallation time which should be in the order of about seven (7) seconds maximum.
  - E. It mayoccasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum emperature of 250 F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling oxidation, or corrosion shall be permitted.
  - F. Bushings withoutflanges shall be installed into housing bore which has received a light coat of sealant per BMS 3-27 (CORBAN 027L), available from Zip Chem Products. Install shrunken bushing and wipeoff any excess sealant that may have extruded around the periphery of both ends of the bushings.
  - G. Bushings withflanges shall be installed in a similar manneras paragraph F, except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manneras to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipcoff any excess sealant around periphery of bushing flange. Wipcomp excess sealant from other end of bushing also. There will not be a bead of sealant about the bushing flange.
  - H. For bushings withexternal grease grooves the inside of the lug will be coated with MIL-C-16173E, ClassII prior to bushing installation, and face of lug will be coated with BMS 3-27 (CORBAN 027L), per paragraph G if the applicable bushing has a flange.

Cor-Ban27L (Formerly ZC-027L)

Manufacturer:

Zip Chem Products

400 Jarvis Drive

Morgan Hill, CA 95037

800-648-2661

PREPARED BY	SYMBOL	DATE
DAVID H. ARGYLE	LGMPM	13 Mar 03
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REV:	A			ENGINEERING DA	TA REQUIREMENTS		SHEET
PART	NUM	BER			NATIONAL STOCK N	JMBER	
68A	41070	02-1006	, 		1620-01-075-3562	2	
26.	an	Prior to contra	act award the detail pa	rt bidder will provide	e certification fron le and that the for	n the forging sou ging source has	ified forging procedures  arce, to the government that an agreement with the detail
	В.	Prior to produ	action, forging lot qua	lification will be according to the contractor will assure	omplished as spec e that this is, or h	ified on the forgi as been accompl	ng drawing and ished by the forging source
27.	FOR	GING SOURC	CE, CONTROL AND	LOCATION OF DI	ES:	i kartus. Nis	
	Α.	Forging draw Die number:	ing:	68A410602-2013 6742	1 · · · · · · · · · · · · · · · · · · ·		graduate services and the
· .	В.	Control of for	ging process:	MCDONNEL DO	UGLAS CORP.	's'	
	C.	. Location of f	orging dies:	KROPP FORGE A DIVISION OI 5301 W. ROOSE CICERO, IL. 60 PH. (708) 652-6 P.O.C. CHUC	F ANADITE, INC VELT ROAD 650-1273 691		
					4 14 4 5 40 5 9 4	120 120 120 120	
				••			
			ı				
PREPA	ARED	ВУ	10-19-01 n		SYMBOL		DATE

#### SOURCE QUALIFICATION REQUIREMENTS (PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-075-3562

PART NUMBER (P/N)68A410702-1006

NOUN: Cylinder Assembly-Main landing gear

AIRCRAFT:F-15

#### SECTION C

#### QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A410702-1006 and specification SAE-AMS-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(d) Plating

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(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-075-3562

PART NUMBER (P/N)68A410702-1006 AIRCRAFT:F-15

NOUN: Cylinder Assembly-Main landing gear

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$5,000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REVISION:						E	ENGINEERING DATA	LIST	* HISTORY *
14	DATA TECH:	SDA	ORG	ORGN SYMBOL		L	LGMPM PR NR:	APPLICATION: P15E	PAGE 1 OF 1
CAGE: MANUFAC 76301 BOEING C	MANUFACTÚRER NAME: BOEING CO/MC DONNELL ACFT	FF				REFER 68A45	REFERENCE NR: 68A452602-1001	NOUN: LANDINGGEAR, RETRAC	NSN : 1620012332153
CAGE DRAWIN	DRAWING NUMBER	REV		SCAR	S	FURN DIST CODE CODE	NOUN	REQUIREMENTS	
98747 00-ALC/LGMPM-FORM 462	FORM 462	\	000	0000	S		ENG.DATA ROMNTS. (ATTACH."A")		
76301 PS 13646		_	0000	0000	S		PROCESS SPECIFICATION	OBTAIN DATA FROM WR-ALC (JEDMICS)	*
76301 PS 15227		_	0000	0000	s o		PROCESS SPECIFICATION	OBTAIN DATA FROM WR-ALC (JEDMICS)	
76301 PS 17169		_	0000	0000	S		PROCESS SPECIFICATION	OBTAIN DATA FROM WR-ALC (JEDMICS)	
76301 PS 20018		_	0000	0000	s o		PROCESS SPECIFICATION	OBTAIN DATA PROM WR-ALC (JEDMICS)	
76301 PS 23007		_	0000	0000	S		PROCESS SPECIFICATION	OBTAIN DATA FROM WR-ALC (JEDMICS)	
76301 PS 23041		<u>                                   </u>	0000	0000	s		PROCESS SPECIFICATION	OBTAIN DATA FROM WR-ALC (JEDMICS)	
76301 ST4M130			0000	0000	s o		BUSHING	OBTAIN DATA FROM WR-ALC (JEDMICS)	
76301 4M139	=	_	0000	0000	S		BUSHING	OBTAIN DATA FROM WR-ALC (JEDMICS)	
76301 68A450631 WITH P/L	H P/L	_	0000	0000	S		BUSHING, TRUNNION-N.L.G.	OBTAIN DATA FROM WR-ALC (JEDMICS)	
/A80342		-		_	-			CHANGE FORM	
76301 68A452602 WITH P/L	7/а н	_	0000	0000	s	Ĺ	CYLINDER ASSY-N.L.G.	OBTAIN DATA FROM WR-ALC (JEDMICS)	
76301 68A452630 WITH P/L	н Р/г	_	0000	0000	s		BUSHING, JURY BRACE-N.L.G.	OBTAIN DATA FROM WR-ALC(JEDMICS)	
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STANDARD ENGINEERING TEXT	DARD ENGINEERING TEXT ALL GOVERNMENT/WILITARY SPECTEICATIONS AND STANDARDS WILL NOT DE	NOTTA	CNA	ACMAT	ארמ ארמ	Ex	or prionteum		
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BUILDING 4/SECTION D	CTION D								- •
700 ROBINS AVE.	700 ROBINS AVE. PHILADELPHIA PA. 19111-5098								
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ENGINEERING DATA LIST REMARKS	A LIST REMARKS						2	×	G - GOV'T DOCUMENT.
								 ∝ Δ	O - OTHERS, CONTRACTOR MUST ACOUIRE.
							M - STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD	WING REQUIRED; V - VENDOR DRAWING;	A - DATA NOT
							11		AVALLAHLE

REV:	ENGINEE	ERING DATA DEQUIREMENTS	
	ONS I/STANDARDS WILL NOT BE FURNISHED IN T		
1. THE FOLLOWING INSTRUCT	TIONS ARE FURNISHED FOR THE MANUFACTURE	OF	
CYLINDER ASSY-NOS	É LANDING GEAR	F-15	
2. PART NUMBER	_	3. NATIONAL STOCK NUMBER	
68A452602-1001		1620-01-233-2153	
4. THE FOLLOWING SPECIFICA FURNISHED UNLESS SO INDICA	ATIONS/STANDARDS, ETC., WILL BE USED IN LIEU ATED.	U OF THE DATA INDICATED. THE SUPERSI	DED DATA WILL NOT BE
5. Use Material ASTM I	3196, ASTM 197, and ASTM B194 in lie	eu of QQ-C-530. (DRAWING 68A	.452630)
	B196, ASTM B197, and ASTM B194 in B AE AMS 4534 in lieu of AMS 4534, and		
7. Mark & Identify per	MIL-STD-130, as an alternate to PS 1600	01.	
vibropeened, or steel indicate a location, Of follows: The serializadigit year of manufact numerous intermittent contract produces more	and components utilize the following stat stamped, in 0.09" letters 0.004"-0.007" O-ALC/LGHLEN will provide S/N locat ation will begin with the CAGE of the coture, followed by a dash and a sequentially contracts will start serialization of item re than 999 items, the serial number shounds: "S/N 98747-03-001."	deep in the location indicated. If the cion instructions. Serialization of ite ntractor named on the contract, for y unique 3 digit number. A contract with the next number in sequence of	e drawing does not m shall be accomplished as llowed by a dash and the 2 ctor who receives of the prior contract. If a
9. Inspection requireme	nts are as follows:		
with the follow ALLOWED" allowed. The is	scent penetrant inspection per ASTM E1 ving acceptance/rejection criteria: NO DI is that the inspection is conducted at the inspector performing the inspection shall las specified in NAS 410.	EFECTS ALLOWED. The intent or required sensitivity level and there were	f "NO DEFECTS will be no indications
B. Ultrasonic Insp	pection per MIL-STD-2154 may be used	as an alternate to MIL-I-8950.	
10. Shot Peen per SAE accomplished.	AMS -S-13165 as an alternate to PS 1402	23, all requirements of Drawing 68.	A452602 (NOTE 19) will be
11. Heat Treat per SAE AMS-H-7199 as an alternate to PS 15935, DRAWING 68A450631 (NOTE 15).			
•	ated to 180 KSI and above, any surface the achining burns per MIL-STD-867. Grin		eat, shall be inspected for
13. Anodize per MIL-A	-8625 (TYPE II, CLASS 1) may be used	as an alternate to PS 13201.	
14. Hard Anodize per M	AIL-A-8625 (Type III, Class 3), color "B	BLACK" #37038 per FED-STD-595	as an alternate to PS 13208.
•			
PREPARED BY		SYMBOL	DATE
DAVID H. ARGYLE		LGMPM	21 May 03

REV:		ENG	GINEERING DATA	A REQUIREMENTS CONT	INUATION S	HEET	
PART	NUMBER		I N	IATIONAL STOCK NUMBER			
68A4	452602-1001	•	1	620-01-233-2153			
15.	Cadmium Plate per	MIL-STD-870 (Type II, Cl	ass2) as an alte	ernate to PS 13101.			:
16.	Finish Specification PS 13646:	68A900000 and 40M114	will not be furn	nished. Finish per the	the followin	ng as an alternate to	
		at Epoxy Waterborne prime nide per MIL-PRF-23377, T		7-85582, Type I, Class	2. Alternate	e primer, one coat	
	B. Apply two top	pecoats of Polyurethane per	MIL-PRF-8528	35, Type I, color #1792	5 (White) p	per FED-STD-595.	÷
17.		d the successful bidder shall ns) to LGHLEN for final re			mentation	(routing documents	and
18.	OO-ALC/LGHLEN items, All deviation	I system engineering retains as, minor and major, from the	s all rights to re he engineering	eview and accept MRB' drawing package will b	S prior to s e submitted	hipment of discrepant for MRB disposition	nt n.
19.	specifications, and component/assemb	ward, the contractor will cer il standards called out and re sly. Contractor is responsible uirements necessary to man GHLEN.	equired for the required to completely	manufacture of this con search these manuals,	tracted land specification	ling gear ns, and standards an	d fully this
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	ARED BY			SYMBOL		DATE	
DAV	VID H. ARGYLE			LGMPM		21 May 03	

		ENGINEERING DATA REQUIREME CONTI (ATTACHMENT "A")	INUATION SHEET	
PART	NUMBER	NATIONAL STOCK NUMBER		·
	452602-1001	1620-01-233-2153		
20.	The required forging shall be procured and dies/tooling.	from the qualified forging source, using the or	iginal certified 1	forging procedures
	that the certified dies and proceed	part bidder shall provide certification, from the dures are available and that the forging source their use in the event they are the successful bid.	has an agreemen	e, to the Government nt with the detail parts
	SAE AMS-A-22771 (ALUMINUI	ualification shall be accomplished as specified M). The detailed part contractor shall assure tertified documentation of accomplishment to t	that this has bee	n accomplished by the
21.	FORGING SOURCE, CONTROL AND	D LOCATION OF DIES:		
	A. Forging Drawing:	68A452602-2009		
	2. Die Number:	12027.31		
	3. Control of Forging Process:	McDonnel Douglas Corp.		
	4. Location of Forging Dies:	WEBER METALS, INC. 16706 S. GARFIELD AVE. PARAMOUNT, CA. 90723-0318 562-602-0260		
22.	INSTRUCTIONS FOR QUALIFICATI	ION OF NEW FORGING SOURCE.		
	new forging dies and the proposed for without the express written consent of use of the dies developed under this con-	shall advise the Government in writing of the riging source. The contractor shall not proceed of the Government-procuring activity. The Gontract. The contractor shall inform the forging the Government has unlimited use rights of the Officer.	I to obtain new fovernment shalling house in writ	orging dies have unlimited ing, at the same time

SYMBOL	DATE	
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			ENGINEERING DATA REQUIREMEN CONT	INUATION SHEET	
			(ATTACHMENT "A")		
68A	NUMBER		NATIONAL STOCK NUMBER		· · · · · · · · · · · · · · · · · · ·
	452602-1001	•	1620-01-233-2153		
	-				
23.	Apply a thin coatin bores and allow to	g of primer per MIL-PRF- fully cure prior to installat	-23377 or MIL-PRF-85582 (AFTER Cation of bushing (PRIMER SHALL NOT	ADMIUM PLATING OBSTRUCT GREA	G) to all bushing ASE PASSAGES).
24.	Install Bushings p	er the following, as an alte	ernate to PS 17034:		
	housing into installations,	which the bushing is instal such as the use of a press	nplished in such a manner as to avoid da fled, or the finish of the O.D. of the bus or hammer is not permitted, and is not a into alignment with the housing bore, or	hing. Forced installa cceptable. A small n	tion of sub-zero on-metallic
	B. Prior to bus contaminati	-	and housing bore shall be cleaned with a	a cleaning solvent to	remove all
	approved by	gen shall be used for all su y OO-ALC/LILE Engineer shing to reach the same ten	b-zero installations unless some other suring. The soak time of the bushing in the operature as the coolant.	b-zero coolant is spe e liquid nitrogen sha	cified, and Il be sufficient to
	of lost time	g shall be installed into the e. Trial runs shall be acco even (7) seconds maximum	housing immediately upon removal from mplished as necessary to minimize install.	n the coolant with ar lation time which sh	n absolute minimum ould be in the order
	cooling of prior to he lamps etc.	the bushing. Detail parts ating, shall be heated by t to the maximum temperate located on areas of the p	eat the housing into which the bushing is in process, which do not have paint or so the use of radiant heat techniques, such a ture of 250 F. Temperature measuring de art expected to reach maximum temperature	ealant or other organ is thermal blankets, i vices shall be used to	ic material applied nfrared monitor heat
	MIL-PRF-	vithout flanges shall be installed into housing bore which has received a light coat of sealant per -81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the of both ends of the bushings.			
	face of lug bushing fla	under flange. Sealant sha ange when bushing is insta	ed in a similar manner as paragraph (F).  all be applied in such a manner as to ensulted. Wipe off any excess sealant around the other end of the bushing also.	are complete coverag	ge of inside face of
	H. For bushi installatio	ngs with external grease gr n, and face of lug will be	rooves the inside of the lug will be coate coated with MIL-PRF-81733 per paragra	d with MIL-C-16173 aph G.	3 prior to bushing
	PARED BY		SYMBOL	DATE	

LGMPM

21 May 03

DAVID H. ARGYLE

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620012332153 NOUN: Cylinder-assy, NLG PART NUMBER (P/N)<u>68A452602-1001</u> AIRCRAFT:F-15

#### SECTION C

## QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A452602-2009 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.
  - (a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(d) Plating

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620012332153 NOUN: Cylinder-assy, NLG PART NUMBER (P/N)68A452602-1001 AIRCRAFT:F-15

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION:	02						ENGINEERING	GNATA		* UCTOPA *
DATE			1		ORGN SYMBOL:	MBOL	li .		PR NR:	APPLICATION:	- 11
, d		DED MAKE.	YGS					LGMPM		FIS ACFT	1 OF 1
76301		BOEING CO/MC DONNELL ACFT	Ę				% E	REFERENCE NR: 68A410702-1005		NOUN: CYLINDER, LANDING GE	NSN: 1620010760547
CAGE	DRAWING NUMBER	NUMBER		REV S	NR NR FURN DIST SHEETS CARDS CODE CODE	R FUI RDS COI	RN DI	ST NOUN		REQUIREMENTS	
76301	OO-ALC/LGMPM		/	A	0004 00	S 0000		ENG. DATA ROMNTS. (ATTACH. "A")	(ATTACH. "A")		
76301	PS 15063		/	H		.S 0000		PROCESS SPECIFICATION		OBTAIN DATA FROM WR-ALC(JEDMICS)	
76301	PS 20018		/	Ħ		S 0000	_	PROCESS SPECIFICATION		OBTAIN DATA FROM WR-ALC(JEDMICS)	
76301	76301 PS 23041		/	Z	0023 00	s - 0000	_	PROCESS SPECIFICATION		OBTAIN DATA FROM WR-ALC(JEDMICS)	= -
76301	ST4M130		\	AF	0000	s 0000	_	BUSHING, SLEEVE-FLANGE SPECIAL		OBTAIN DATA FROM WR-ALC(JEDMICS)	··· )
76301	68A410602 WITH	P/L	/	Ω	0003 00	S 0000	_	CYLINDER ASSYM.L.G.FORGING		OBTAIN DATA FROM WR-ALC(JEDMICS)	
76301	68A410670 WITH	1/a	\	-	0001 00	s 0000		BUSHING, OUTR. CYLNDR. LUG-M. L.G.		OBTAIN DATA FROM WR-ALC(JEDMICS)	
16301	76301 68A410702 WITH F	P/L	\	v	0003 00	s 0000	_	CYLINDER ASSEMBLY-MAIN LND. GEAR	1	OBTAIN DATA FROM WR-ALC(JEDMICS)	
76301	76301 688410720 WITH F	P/L	\	ш	0001	S 0000	_	BUSHING, TRUNNION PIN-M.L.G.		OBTAIN DATA FROM WR-ALC(JEDMICS)	
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STAN	STANDARD ENGINEERING TEXT	ING TEXT						·	-		
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ENGI	ENGINEERING DATA LIST REMARKS	IST REMARKS						FURNI C - C S - E M - S	FURNISHED METHOD CODE LEGEND: C - CLASSIFIED DOCUMENT. S - FURNISHED MITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED; FIRNISHED WITH CONTRACT BASED	S LEGEND: X - DATA SUPPLIED (NOT IN EDCARS).  SMT. R - FURNISHED BY PCD UPON REQUEST.  PLICITATION. P - PARTIAL DOCUMENT FURNISHED.  NOTE DOCUMENT FURNISHED.  NOTE DOCUMENT.	
									O WITH CHICKNEY		AVAILABLE.

	<u> </u>	<u></u>	
REV:	ENGINE	ERING DATA REQUIREMENTS (ATTACHMENT "A")	
	ONS I/STANDARDS WILL NOT BE FURNISHED IN T		
	TIONS ARE FURNISHED FOR THE MANUFACTURE	OF	
CYLINDER ASSEMBLY	Y-MAIN LANDING GEAR		
2. PART NUMBER		3. NATIONAL STOCK NUMBER	
68A410702-1005		1620-01-076-0547	
4. THE FOLLOWING SPECIFICATION FURNISHED UNLESS SO INDICATION	ATIONS/STANDARDS, ETC., WILL BE USED IN LIE ATED.	U OF THE DATA INDICATED. THE SUPERS	EDED DATA WILL NOT BE
5. Use Material SAE Al	MS 6419 in lieu of AMS 6419, (Drawing	; 68A410602).	
6. Use Material SAE AN	MS 5629 in lieu of AMS 5629, (Drawing	68A410670).	
7. Use Material SAE AN 68A410720).	AS 4640 in lieu of AMS 4640. Alternate	Material use SAE AMS 4590 in li	ieu of AMS 4590. (Drawing
8. Use Material ASTM	B196 in lieu of QQ-C-530, (Drawing 68	3A410720, Note 15).	
9. Inspection requireme	nts are as follows:		
with the following ALLOWED" is to The inspector per Level III as specifically	ent penetrant inspection in lieu of PS 2120 g acceptance/rejection criteria: NO DEF that the inspection is conducted at the required field in NAS 410.  Ic particle inspection per ASTM E1444, it is particle inspection performing the inspect of performing the should be allowed. The inspector performing the should be accomplished as specified in NAS MIL-STD-130, as an alternate to PS 160 in shall be accomplished as follows:  The shall be vibropeened, or steel stamped, in the shall be vibropeened, or steel stamped, in the shall be accomplished as follows:  The serialization will be accomplished as follows: The serialization will be allowed as follows: The serialization will be accomplished as follows: The serialization will be accomplished. If a contract produces more prior contract.	ECTS ALLOWED. The intent of "uired sensitivity level and there will to Level II with the inspection process."  In lieu of PS 21201. Use full wave acceptance/rejection criteria: NO Dition is conducted at the required sensing spection will be certified to Level 410.  Of per drawing requirements.  O.09" letters 0.004"-0.007" deep it will provide S/N location instruction begin with the CAGE of the contract followed by a dash and a sequential will start serialization of item with the than 999 items, the serial number	NO DEFECTS I be no indications allowed. Redures developed by a  direct current (FWDC), wet EFECTS ALLOWED. The Institute level and there will II with the inspection  in the location indicated. If ions. Serialization of item ctor named on the contract, ly unique 3 digit number. A in the next number in
PREPARED BY		SYMBOL	DATE
DAVID H. ARGYLE		LGMPM	13 Mar 03

	<u> </u>		
REV:	ENGINEERING DA	ATA REQUIREMENT. JONTINUATION	SHEET
Α		(ATTACHMENT "A")	
PART NUMBER	1	NATIONAL STOCK NUMBER	
68A410702-1005	•	1620-01-076-0547	ing the second s
12. Heat Treat per SAE (Note 16).	E AMS-H-6875 as an alternate to PS 1529	6. Drawing 68A410702(Note 14) a	and Drawing 68A410602
13. Heat Treat per SAF	E AMS-H-6875 as an alternate to PS 1523	8, Drawing 68A410670(Note 6).	
14. Heat Treat per SA	E AMS-H-7199 as an alternate to PS 1593	35, Drawing 68A410720(Note 15).	
• •	ct per MIL-STD-867 as an alternate to PS 602 (Note 19), and (Note XI, Forging N		4410702(Note 17),
16. Shot Peen per SAE (Note 23).	AMS-S-13165 as an alternate to PS 1402	3. Drawing 68A410702(Note 23) a	and Drawing 68A410602
17. Passivate per SAE	AMS-QQ-P-35, ASTM A967(Type 5) as	an alterenate to PS 13001. Drawing	g 68A410670(Note 9).
18. Forging Cleanlines	s per SAE AMS 2300 in lieu of AMS 230	00. Drawing 68A410602 (Note:10).	
•	or MIL-STD-1501(Type II, Class 3) as an 02(Notes 26 & 28).	alternate to PS 13102. Drawing 68	A410702(Notes 26 & 28) and
20. Low Embrittlement 68A410702, NOT	t Cadmium Plate per MIL-STD-870 (Type IE 19.	e II, Class 1) as an alternate to PS 1	3144. Drawing
21. Low Embrittlement 68AA410602, NO	t Cadmium Plate per MIL-STD-870 (Typ TE 35.	e I, Class 2) as an alternate to PS	13144. Drawing
22. Finish Specification	n 68A900000 is not required and will not	be furnished. Finish per the follow	ing in lieu of PS 13646:
	at Epoxy Waterborne primer per MIL-PRI nide per MIL-PRF-23377, Type I.	F-85582, Type I, Class 2. Alternate	e primer, one coat
B. Apply two top	coats of Polyurethane per MIL-PRF-8528	85, Type I, color #17925 (White) p	per FED-STD-595.
	stem engineering retains all rights to revie inor and major, from the engineering draw		
specifications, an component/assemb	ward, the contractor will certify to the good standards called out and required for the bly. Contractor is responsible to complete quirements necessary to manufacture lands. LILE.	e manufacture of this contracted lar ly search these manuals, specificati	ding gear ons, and standards and fully
PREPARED BY		SYMBOL	DATE
DAVID H. ARGYLE		LGMPM	13 Mar 03

REV:	ENGINEERING DATA REQUIREMENT "A")	SHEET
PART NUMBER 68A410702-1005	NATIONAL STOCK NUMBER 1620-01-076-0547	

- 25. Install Bushings per the following, as an alternate to PS 17034:
  - A. The bushing installations shall be accomplished in such a manneras to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forcedinstallation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. Asmall non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.
  - B. Priorto bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.
  - C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILE Engineering. Thesoak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.
  - D. The bushing shall be installed into the housing immediately upon removal from the coolant withan absolute minimum of lost time. Trialruns shall be accomplished as necessary to minimizenstallation time which should be in the order of about seven (7) seconds maximum.
  - E. It mayoccasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detailparts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum emperature of 250 F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum emperature. No scaling oxidation, or corrosion shall be permitted.
  - F. Bushings withoutflanges shall be installed into housing bore which has received a light coat of sealant per BMS 3-27 (CORBAN 027L), available from Zip Chem Products. Install shrunken bushing and wipeoff any excess sealant that may have extruded around the periphery of both ends of the bushings.
  - G. Bushings withflanges shall be installed in a similar manneras paragraph F, except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manneras to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipcoff any excess sealant around periphery of bushing flange. Wipcomp excess sealant from other end of bushing also. There will not be a bead of sealant about the bushing flange.
  - H. For bushings withexternal grease grooves the inside of the lug will be coated with MIL-C-16173E, ClassII prior to bushing installation, and face of lug will be coated with BMS 3-27 (CORBAN 027L), per paragraph G if the applicable bushing has a flange.

Cor-Ban 27L (Formerly ZC-027L)

Manufacturer:

Zip Chem Products

400 Jarvis Drive

Morgan Hill, CA 95037

800-648-2661

PREPARED BY	SYMBOL	DATE
DAVID H. ARGYLE	LGMPM	13 Mar 03
		<u> </u>

PAGE

A A	ENGINEERING DATA REQUIREME! CONTINUATION SHEET (ATTACHMENT "A")
PART NUMBER	NATIONAL STOCK NUMBER
68A410702-1005	1620-01-076-0547
and dies/tooling.  A. Prior to contract award the detail the certified dies and and forging	ed from the qualified forging source using the original certified forging procedures  part bidder will provide certification from the forging source, to the government that g procedures are available and that the forging source has an agreement with the detail
B. Prior to production, forging lot of SAE AMS-F-7190 (STEEL).	for their use in the event they are the successful bidder.  qualification will be accomplished as specified on the forging drawing and The contractor will assure that this is, or has been accomplished by the forging source mentation of accomplishment to the Government.  ND LOCATION OF DIES:
A. Forging drawing: Die number:	68A410602-2013 6742
B. Control of forging process:	MCDONNEL DOUGLAS CORP.
C. Location of forging dies:	KROPP FORGE COMPANY A DIVISION OF ANADITE, INC. 5301 W. ROOSEVELT ROAD CICERO, IL. 60650-1273 PH. (708) 652-6691 P.O.C. CHUCK EXT. 324

#### SOURCE QUALIFICATION REQUIREMENTS (PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-076-0547

PART NUMBER (P/N)68A410702-1005

NOUN: Cylinder Assembly-Main Landing Gear

AIRCRAFT:F-15

#### SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A410702-1005 and specification SAE-AMS-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding (d) Plating

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-076-0547

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PART NUMBER (P/N)68A410702-1005

NOUN: Cylinder Assembly-Main Landing Gear

AIRCRAFT:F-15

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$5,000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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	DATA TECH:	SDB		ORGN (	ORGN SYMBOL	II ··	H	LGMPM PR NR:	APPLICATION:	F-15E	PAGE 1 OF 1
CAGE: MANUFACT	MANUFACTURER NAME: BOEING CO/MC DONNELL ACFT	CFT				E 20	FERE 1A412	REFERENCE NR: 68A412702-1001	NOUN: CYLINDER,MAIN LANDI	ĮDI	NSN :
CAGE DRAWING	DRAWING NUMBER	<u>124</u>	REV SH	NR IEETS	NR NR FURN DIST SHEETS CARDS CODE CODE	O SOC	IST	NOUN		REQUIREMENTS	
76301 PS 15063		`	۲	0000	0000	S	I A	PROCESS SPECIFICATION	OBTAIN DATA FROM WR-ALC.		
76301 PS 23041		-	<del> </del>	0000	0000	S	A.	PROCESS SPECIFICATION	OBTAIN DATA FROM WR-ALC.		
76301 68A410720 WITH P/L	1/d		m	0000	0000	5	Ā	BUSHING	OBTAIN DATA FROM WR-ALC.		
76301 68A410721 WITH P/L	P/L	\	۲	0000	0000	S	A	BUSHING	OBTAIN DATA FROM WR-ALC.		
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76301 68A412702 WITH P/L	P/L	\	<u>о</u>	0000	0000	S	6	CYLINDER ASSEMBLY	OBTAIN DATA FROM WR-ALC.		
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STANDARD ENGINEERING TEXT	ING TEXT						I				
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ENGINEERING DATA LIST REMARKS	LIST REMARKS							FURNISHED METHOD CODE LEGEND: C - CLASSIFIED DOCUMENT.	× ×	- DATA SUPPLIED (NOT IN EDCARS). - FURNISHED BY PCD UPON REQUEST.	G - GOV'T DOCUMENT. O - OTHERS, CONTRACTOR
								,			

REV:		
ENG	GINEERING DATA REQUIREMENTS  (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS USTANDARDS WILL NOT BE FURNISHED IN THE BID SET.  1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF	44.	
		<u> </u>
CYLINDER ASSEMBLY-MAIN LANDING GEAR		markan di kacamatan di Kabupatèn Balandaran di Kabupatèn Balandaran di Kabupatèn Balandaran di Kabupatèn Baland Balandaran di Kabupatèn Balandaran di Kabupatèn Balandaran di Kabupatèn Balandaran di Kabupatèn Balandaran di K
2. PART NUMBER	3. NATIONAL STOCK NUMBER	
68A412702-1001	1620-01-235-2927	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. 1		
5. OO-ALC/LILE SYSTEM ENGINEERING RETAINS ALL RI REVIEW BOARD (MRB) DISPOSITIONS PRIOR TO SHIPME AND MAJOR, FROM THE ENGINEERING DRAWING PACK	INT OF DISCREPANT ITEM. A	LL DEVIATIONS, MINOR
6. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SI FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, THE MANUFACTURE OF THIS CONTRACTED LANDING OR RESPONSIBLE TO COMPLETELY SEARCH THESE MANUA UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUAL OF THE OFFICE OF OCCUPANT OF THE OFFICE OF THE OCCUPANT OF THE OC	AND STANDARDS CALLED OF GEAR COMPONENT/ASSEMBLY ALS, SPECIFICATIONS, AND STANUFACTURE LANDING GEAR O-ALC/LILE.	OUT AND REQUIRED FOR BY. CONTRACTOR IS TANDARDS AND FULLY COMPONENTS. ANY
7. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDE DOCUMENTATION (ROUTING DOCUMENTS AND PROCES BEFORE PRODUCTION BEGINS.	R SHALL PROVIDE A COPY O SS SPECIFICATIONS) TO LILE	F THE PROCESSING FOR FINAL REVIEW
8. IDENTIFICATION AND MARKING PER MIL-STD-130 AS	AN ALTERNATE TO PS 16001	
9. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), LOCATION INDICATED. IF THE DRAWING DOES NOT INIT S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SERIALIZATION SHALL BEGIN WITH THE CAGE (FSCM) OF FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MAN SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH CONTRACT. IF A CONTRACT PRODUCES MORE THAN 99 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD	IN 0.09" LETTERS 0.004"-0.007 DICATE A LOCATION, OO-ALO M SHALL BE ACCOMPLISHED OF THE CONTRACTOR NAME OUFACTURE, FOLLOWED BY A TOR WHO RECEIVES NUMERO TH THE NEXT NUMBER IN SECONS OF THEMS, THE SERIAL NUMBE	7" DEEP IN THE C/LILE SHALL PROVIDE AS FOLLOWS: THE D ON THE CONTRACT, A DASH AND A OUS INTERMITTENT QUENCE OF THE PRIOR ER SHOULD BEGIN USING
10. MATERIAL SPECIFICATIONS: 300M STEEL MATERIAL PER SAE AMS 6419 IN LIEU OF 17-4PH MATERIAL PER SAE AMS 5643 IN LIEU OF AMS BERYLLIUM COPPER MATERIAL PER ASTM B 196 IN L	S 5643.	
11. MATERIAL CLEANLINESS PER SAE AMS 2300 IN LIEU	OF AMS 2300.	
12. SHOT PEEN PER SAE AMS-S-13165 MAY BE USED AS A OF DRAWING 68A412702, NOTE 23 WILL BE ACCOMPLISH	N ALTERNATE TO PS 14023, E ED WITH EXCEPTION NOTED	BUT ALL REQUIREMENTS ON DRAWING.
	SYMBOL	DATE
DENISE S. BISHOP	LGMPM	26 FEB 02

- 13. TEMPER ETCH PER MIL-STD-867 AS AN ALTERNATE TO PS 21205
- 14. INSPECTION PER SAE AMS-F-7190 AS AN ALTERNATE TO PS 23006.
- PASSIVATE PER SAE AMS-QQ-P-35, ASTM A967 AS AN ALTERNATE TO PS 13001.
- HEAT TREAT PER SAE AMS-H-7199 AS AN ALTERNATE TO PS 15935.
- 17. HEAT TREAT PER SAE AMS-H-6875 AS AN ALTERNATE TO PS 15296, PS 15227 AND PS 15351 IN LIEU OF PS 15251 (NOTE 14, DWG 68A412702).
- 18. PARTS HEAT TREATED TO 180KSI AND ABOVE: ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866.
- 19. CADMIUM PLATE PER MIL-STD-870 TYPE II ,CLASS 1 IN LIEU OF PS 13444.
- 20. CADMIUM PLATE PER SAE AMS-QQ-P-416 IN LIEU OF QQ-P-416.
- 21. CHROMIUM PLATE PER MIL-STD-1501 TYPE I OR II, CLASS 2 AS AN ALTERNATE TO PS 13102.
- 22. INSPECTION REQUIREMENTS ARE AS FOLLOWS:
- A. MAGNETIC PARTICLE INSPECTION PER ASTM E1444 IN LIEU OF PS 21201. FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED I NAS-410.
- B. FLUORESCENT PENETRANT INSPECTION PER ASTM E1417, TYPE I, METHOD B OR C LEVEL 3 OR 4 IN LIEU OF PS 21202 WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH HE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.
- 23. FINISH SPECIFICATION 68A900000 WILL NOT BE FURNISHED. THE FOLLOWING FINISH MAY BE USED AS AN ALTERNATE TO PS 13646 (NOTE 31, DWG 68A412702):
- A. APPLY ONE COAT EPOXY WATERBORN PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYMIDE PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377B.
- B. APPLY TWO TOP COATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595.

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DENISE S. BISHOP	LGMPM	26 FEB 02

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24. INSTALL BUSHING	GS PER THE FOLLOWING AS AN AL	TERNATE TO PS 17034:
TO THE FINISH ON THE THE O.D. OF THE BUS PRESS OR HAMMER IS	IE I.D. OF THE HOUSING INTO WHI SHING. FORCED INSTALLATION OF S NOT PERMITTED, AND IS NOT AC	MPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE CH THE BUSHING IS INSTALLED, OR THE FINISH OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A CEPTABLE. A SMALL NON-METALLIC HAMMER MAY THE HOUSING BORE, OR TO SEAT THE BUSHING.
	IING INSTALLATION, THE PARTS A TO REMOVE ALL CONTAMINATION	ND HOUSING BORE SHALL BE CLEANED WITH N.
SUB-ZERO COOLANT	IS SPECIFIED, AND APPROVED BY ( LIQUID NITROGEN SHALL BE SUFI	ZERO INSTALLATIONS UNLESS SOME OTHER OO-ALC/LILEC ENGINEERING. THE SOAK TIME OF FICIENT TO ALLOW THE BUSHING TO REACH THE
COOLANT WITH AN A	BSOLUTE MINIMUM OF LOST TIME WIZE INSTALLATION TIME WHICH	OUSING IMMEDIATELY UPON REMOVAL FROM THE E. TRIAL RUNS SHALL BE ACCOMPLISHED AS SHOULD BE IN THE ORDER OF ABOUT SEVEN (7)
INSTALLED, IN ADDIT NOT HAVE PAINT OR SHALL BE HEATED BY LAMPS ETC.; TO THE BE USED TO MONITOR	TION TO SUB-ZERO COOLING OF TH SEALANT OR OTHER ORGANIC MA Y THE USE OF RADIANT HEAT TECH MAXIMUM TEMPERATURE OF 250 R HEAT AND SHALL BE LOCATED O	THE HOUSING INTO WHICH THE BUSHING IS TO BE HE BUSHING. DETAIL PARTS IN PROCESS, WHICH DO TERIAL APPLIED PRIOR TO HEATING, THE PARTS HNIQUES, SUCH AS THERMAL BLANKETS, INFRARED F. THE TEMPERATURE MEASURING DEVICES SHALL ON AREAS OF THE PART EXPECTED TO REACH OR CORROSION SHALL BE PERMITTED.
LIGHT COAT OF SEAL	ANT PER MIL-S-81733. INSTALL SH	LED INTO HOUSING BORE WHICH HAS RECEIVED A IRUNKEN BUSHING AND WIPE OFF ANY EXCESS ERIPHERY OF BOTH ENDS OF THE BUSHINGS.
SEALANT SHALL ALSO A MANNER AS TO ENS INSTALLED. WIPE OF	O BE APPLIED TO FACE OR LUG UN SURE COMPLETE COVERAGE OF IN	IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT NDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH ISIDE FACE OF BUSHING FLANGE WHEN BUSHING IS PERIPHERY OF BUSHING FLANGE FORMING A BEAD. HING ALSO.
· ·		ES THE INSIDE OF THE LUG WILL BE COATED WITH CE OF LUG WILL BE COATED WITH MIL-S-81733 PER

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#### 25. FORGING REQUIREMENT:

- A. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.
- 1. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.
- 2. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 (STEEL). THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.
- 26. FORGING SOURCE, CONTROL AND LOCATION OF DIES:
  - A. FORGING DRAWING: 68A412702 P/N 68A412702-2005
  - B. DIE NUMBER: 4895
  - C. CONTROL OF FORGING PROCESS: BOEING
  - D. LOCATION OF FORGING DIES: PARK DROP FORGE DIV.

777 E. 79TH STREET CLEVELAND, OH. 44103 PHONE: (216) 431-2900

PREPARED BY

DENISE S. BISHOP

SYMBOL

LGMPM

26 Feb 02

## SOURCE QUALIFICATION REQUIREMENTS (PL98-525, SECTION 2319)

STOCK NR (NSN)1620012352927 NOUN: Cylinder assembly, MLG

PART NUMBER (P/N)68A412702-1001 AIRCRAFT:F-15E

#### SECTION C

## QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A412702-1001 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

# SOURCE QUALIFICATION REQUIREMENTS (PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620012352927</u> NOUN: <u>Cylinder assembly</u>, <u>MLG</u> PART NUMBER (P/N)<u>68A412702-1001</u> AIRCRAFT:F-15E

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$5000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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4. THE FOLLOWING SPECIFICA FURNISHED UNLESS SO INDICA	TIONS/STANDARDS, ETC., WILL BE USED IN LIEU TED.	U OF THE DATA INDICATED. THE SUPERS	SEDED DATA WILL NOT BE
5. MARKING AND IDE	NTIFICATION PER MIL-STD-130 IN	LIEU OF PS 16001.	
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TREAT SHALL BE INSI	-TREATED TO 180 KSI AND ABOVI PECTED FOR ABUSIVE GRINDING LL BE PER MIL-STD-866 IN LIEU O	MACHINING BURNS PER MIL-	ACHINED AFTER HEAT STD-867 IN LIEU OF PS
12. SHOT PEEN PER S.	AE AMS- S-13165 AS AN ALTERNA	TE TO PS 14023.	
13. CADMIUM PLATE	PER MIL-STD-870 TYPE II CL 2 AS	AN ALTERNATIVE TO PS 1314	4.
14. CHROME PLATE P	ER MIL-STD-1501 TYPE II CL 3 AS	AN ALTERNATIVE TO PS 1310	2.
15. PER DRAWING RE	QUIREMENTS, PAINT AS FOLLOW	vs:	$x_{i_1} = x_{i_1} + x_{i_2}$
EPOXY POLYAMIDE P	OXY WATERBORNE PRIMER PER N RIMER PER MIL-PRF-23377 TYPE 1 COLOR NUMBER 17925 (WHITE) I	. APPLY TWO TOPCOATS POL	YURETHANE PER
16. INTERPRET DRAW	INGS PER MIL-STD-100 AS AN AL	TERNATE TO 40M114.	
17. PER DRAWINGS ST	T4M139 AND 4M139, MATERIAL PE	ER SAE AMS 4640 IN LIEU OF A	MS 4640.
18. PER DRAWINGS ST QQ-P-416 TYPE II CL 2.	C4M139 AND 4M139, CADMIUM PL	ATE PER SAE AMS QQ-P-416 T	YPE II CL 2 IN LIEU OF
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22. FORGING SOURCES, CONTROL AND LOCATI	ON OF DIES:	
A. FORGING DRAWING: 68A452704-2001		Service and provide
B. CONTROL OF FORGING PROCESS: KROPP	FORGING	
C. FORGING DIE NUMBER: 7992		
D. LOCATION OF FORGING DIE:		
KROPP FORGE COMPANY		
A DIVISION OF PARK-OHIO		
5301 W. ROOSEVELT ROAD		
CICERO, IL. 60650-1273 PHONE: (708) 652-6691		
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PAGE 4 OF 4

## SOURCE QUALIFICATION REQUIREMENTS (PL98-525, SECTION 2319)

STOCK NR (NSN)1620012329310 NOUN: Piston NLG PART NUMBER (P/N)<u>68A452704-1003</u> AIRCRAFT:F-15E

#### SECTION C

## QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A452704-2001 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

# SOURCE QUALIFICATION REQUIREMENTS (PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620012329310</u> NOUN: <u>Piston NLG</u>

PART NUMBER (P/N)<u>68A452704-1003</u> AIRCRAFT:F-15E

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$4000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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2. PART NUMBER		3. NATIONAL STOCK NUMBER		
68A412702-1002		1620-01-236-3518		
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7. AFTER CONTRACT A DOCUMENTATION (ROBEFORE PRODUCTION	AWARD, THE SUCCESSFUL BIDDE UTING DOCUMENTS AND PROCES BEGINS.	R SHALL PROVIDE A COPY ( S SPECIFICATIONS) TO LILE	OF THE PROCESSING FOR FINAL REVIEW	
8. IDENTIFICATION AN	ND MARKING PER MIL-STD-130 AS	AN ALTERNATE TO PS 16001	ı <b>.</b>	
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11. MATERIAL CLEANLI	INESS PER SAE AMS 2300 IN LIEU (	OF AMS 2300.		
12. SHOT PEEN PER SAE OF DRAWING 68A412702	AMS-S-13165 MAY BE USED AS AN , NOTE 23 WILL BE ACCOMPLISHE	N ALTERNATE TO PS 14023, I ED WITH EXCEPTION NOTED	BUT ALL REQUIREMENTS ON DRAWING.	
EPARED BY	51	Megi	DATE	
DAVID H. ARGYLE	•	GMPM	19 MAR 02	
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nev:	Engineering data requirements continuation sneet  (ATTACHMENT "A")
PART NUMBER 68A412702-1002	1620-01-236-3518
13. TEMPER ETCH PE	R MIL-STD-867 AS AN ALTERNATE TO PS 21205
14. INSPECTION PER S	AE AMS-F-7190 AS AN ALTERNATE TO PS 23006.

- 15. PASSIVATE PER SAE AMS-QQ-P-35, ASTM A967 AS AN ALTERNATE TO PS 13001.
- 16. HEAT TREAT PER SAE AMS-H-7199 AS AN ALTERNATE TO PS 15935.
- 17. HEAT TREAT PER SAE AMS-H-6875 AS AN ALTERNATE TO PS 15296, PS 15227 AND PS 15351 IN LIEU OF PS 15251 (NOTE 14, DG. 68412702).
- 18. PARTS HEAT TREATED TO 180KSI AND ABOVE: ANY SURFACE GROUND/MACHINED AFTER HEAT. SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866.
- 19. CADMIUM PLATE PER MIL-STD-870 TYPE II, CLASS 1 AS AN ALTERNATE TO PS 13444.
- 20. CADMIUM PLATE PER MIL-STD-870 IN LIEU OF QQ-P-416.
- 21. CHROMIUM PLATE PER MIL-STD-1501 TYPE I OR II, CLASS 2 AS AN ALTERNATE TO PS 13102.
- 22. INSPECTION REQUIREMENTS ARE AS FOLLOWS:
- A. MAGNETIC PARTICLE INSPECTION PER ASTM E1444 IN LIEU OF PS 21201. FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED I NAS-410.
- B. FLUORESCENT PENETRANT INSPECTION PER ASTM E1417, TYPE I, METHOD B OR C LEVEL 3 OR 4 IN LIEU OF PS 21202 WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH HE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.
- 23. FINISH SPECIFICATION 68A900000 WILL NOT BE FURNISHED. THE FOLLOWING FINISH MAY BE USED AS AN ALTERNATE TO PS 13646 (NOTE 31, DWG 68A412702):
- A. APPLY ONE COAT EPOXY WATERBORN PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYMIDE PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377B.
- B. APPLY TWO TOP COATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595.

PREPARED BY	SYMBOL	DATE	
DAVID H. ARGYLE	LGMPM	19 MAR 02	
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68A412702-1002		1620-01-236-3518	
24. INSTALL BUSHING	S PER THE FOLLOWING AS AN	ALTERNATE TO PS 17034:	
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EPARED BY			
		SYMBOL	BATE
DAVID H. ARGYLE		LGMPM	19 MAR 02

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FART NUMBER 68A412702-1002	RATIONAL STOCK NUMBER
25. FORGING REQUIRE	1620-01-236-3518

# 25. FORGING REQUIREMENT:

- A. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.
- 1. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.
- 2. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 (STEEL). THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.
- 26. FORGING SOURCE, CONTROL AND LOCATION OF DIES:
  - A. FORGING DRAWING: 68A412702 P/N 68A412702-2006
  - B. DIE NUMBER: 4896
  - C. CONTROL OF FORGING PROCESS: BOEING
  - D. LOCATION OF FORGING DIES: PARK DROP FORGE DIV. 777 E. 79TH STREET

CLEVELAND, OH. 44103 PHONE: (216) 431-2900

27. DISREGARD NOTE 36 ON DWG. 68A412702.

MEPARED BY	Sylego	
DAVID H. ARGYLE		DATE
	LGMPM	19 MAR 02
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The state of the s		NAME OF THE PARTY

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620012363518

PART NUMBER (P/N)68A412702-1002

NOUN: Cylinder Assembly-Main Landing Gear

AIRCRAFT:F-15E

#### SECTION C

### QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>68A412702-1002</u> and specification <u>MIL-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620012363518</u>

PART NUMBER (P/N)68A412702-1002 AIRCRAFT:F-15E

NOUN: Cylinder Assembly-Main Landing Gear

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$5000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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FURNISHED METHOD CODE LEGEND:

ENGINEERING DATA LIST REMARKS

C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED:

R - FURNISHED BY PCD UPON REQUEST. P - PARTIAL DOCUMENT FURNISHED. V - URNIND DDRWING.

X - DATA SUPPLIED (NOT IN EDCARS). G - GOV'T DOCUMENT.

O - OTHERS, CONTRACTOR MUST ACQUIRE.

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	IONS ARE FURNISHED FOR THE MANUFACTURE C	DF	
CYLINDER ASSY,	INNER - SHOCK STRUT, NLG		
2. PART NUMBER		3. NATIONAL STOCK NUMBER	
2007644-103		1620-01-259-0559	
4. THE FOLLOWING SPECIFICATION FURNISHED UNLESS SO INDICATION	TIONS/STANDARDS, ETC., WILL BE USED IN LIEU TED.	OF THE DATA INDICATED. THE SUPERSED	DED DATA WILL NOT BE
5. MATL REF: 300M S AMS 2300 IN LIEU OF	TEEL PER AMS 6414, AMS 6257, CL AMS 2300.	ASS 3, IN LIEU OF MIL-S-8844, (	CLEANLINESS PER SAE
6. HEAT TREAT PER S	SAE AMS-H-6875 IN LIEU OF MIL-H-	6875.	
	FREATED TO 180 KSI AND ABOVE, A SPECTED FOR ABUSIVE GRINDING/I D-866.		
DIRECT CURRENT (FV ACCEPTANCE/REJECT THAT THE INSPECTION INDICATIONS ALLOW	FIC PARTICLE INSPECTION PER AST VDC), WET CONTINUOUS METHOD, FION CRITERIA: NO DEFECTS ALLO IN IS CONDUCTED AT THE REQUIRI ED. THE INSPECTOR PERFORMING IN PROCEDURE DEVELOPED BY A L	, FLUORESCENT TYPE WITH TI DWED. THE INTENT OF NO DE ED SENSITIVITY LEVEL AND T IS THE INSPECTION SHALL BE C	HE FOLLOWING FECTS ALLOWED IS HERE SHALL BE NO CERTIFIED TO LEVEL II
9. SHOT PEEN PER SA	E AMS-S-13165 IN LIEU OF MIL-S-13	3165.	
10. CHROME PLATE 1	O DRAWING REQUIREMENTS PER	R SAE AMS-S-QQ-C-320 IN LIEU	OF QQ-C-320.
11. PAINT REQUIREM	ENTS AS FOLLOWS:		
	AT EPOXY WATERBORNE PRIMER I YAMIDE PRIMER PER MIL-PRF-2337		
B. APPLY TWO TO FED-STD-595, IN LIEU	PCOATS POLYURETHANE PER MIL- OF MIL-C-83286.	-PRF-85285, TYPE I, COLOR NU	MBER 17925 (WHITE) PER
	IM4951 CADMIUM PLATING WILL N NATE USE SPEC MM5542, CADMIUN		MITED (PROPRIETARY)
13. CORROSION PROT	TECTION PER MIL-C-16173, GRADE 1	OR MIL-C-11796, CLASS 1 OR 2	2 IN LIEU OF MM5752.
14. IDENTIFICATION	AND MARKING PER MIL-STD-130 IN	LIEU OF TM1040.	
OR 4 IN LIEU OF MIL- ALLOWED. THE INTE REQUIRED SENSITIVI PERFORMING THE IN	ESCENT PENETRANT INSPECTION I I-6866 WITH THE FOLLOWING ACCI ENT OF NO DEFECTS ALLOWED IS T ITY LEVEL AND THERE SHALL BE N SPECTION SHALL BE CERTIFIED TO VEL III AS SPECIFIED IN NAS-410.	EPTANCE/REJECTION CRITERIA THAT THE INSPECTION IS CONI TO INDICATIONS ALLOWED. T	A: NO DEFECTS DUCTED AT THE HE INSPECTOR
PREPARED BY		SYMBOL	DATE
CAROL HYER			·
		LGMPM	5 Nov 02
OO ALC FORM 462 (	ACT OC /EC Millio montance.		- · - · · · · · · · · · · · · · · · · ·

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REV:	ENGINEERING DA	TA REQUIREMENTS CONTINUATION : (ATTACHMENT "A")	SHEET
PART NUMBER		NATIONAL STOCK NUMBER	
2007644-103		1620-01-259-0559	
0.004" - 0.007" DEEP IN OO-ALC/LGHLEN SHA ACCOMPLISHED AS F NAMED ON THE CON' BY A DASH AND A SE INTERMITTENT CONTO OF THE PRIOR CONTR	SHALL BE VIBROPEENED (WITH VINTHE LOCATION INDICATED. IF TO LL PROVIDE S/N LOCATION INSTRUCTION SHOULD BY A DASH AN QUENTIALLY UNIQUE 3 DIGIT NUMBERS. THE SET A DIGIT SERIAL START SERIAL START SERIAL START.	HE DRAWING DOES NOT INDIG UCTIONS. SERIALIZATION OF ALL BEGIN WITH THE CAGE O ID THE 2 DIGIT YEAR OF MANI MBER. A CONTRACTOR WHO F ION OF ITEM WITH THE NEXT MORE THAN 999 ITEMS, THE S	CATE A LOCATION, ITEM SHALL BE F THE CONTRACTOR UFACTURE, FOLLOWED RECEIVES NUMEROUS NUMBER IN SEQUENCE BERIAL NUMBER
PLATING) TO ALL BU	NIFORM COATING OF PRIMER PER I SHING BORES AND ALLOW TO FUL OBSTRUCT GREASE PASSAGES).	MIL-PRF-23377 OR MIL-PRF-855 LY CURE, PRIOR TO INSTALLA	82 (AFTER CADMIUM ATION OF BUSHING
18. PER DRAWING 200	06404-247, USE MATERIAL SAE AMS	4640 IN LIEU OF AMS 4640.	
19 CADMIUM PLATE	TO DRAWING SPECIFICATION PER	SAE AMS-QQ-P-416 IN LIEU OF	QQ-P-416.
20. PER DRAWING 200	07644, FLAGNOTE 36 IS NO LONGE	R APPLICABLE AS NO HAND FO	ORGINGS CAN BE USED.
21. PER DRAWING 200	07404-81, USE MATERIAL ASTM B19	6, ASTM B197, ASTM B194 IN L	EU OF QQ-C-530.
REVIEW BOARD (MRE	SYSTEM ENGINEERING RETAINS AI B'S) DISPOSITIONS PRIOR TO SHIPM THE ENGINEERING DRAWING PACK	ENT OF DISCREPANT ITEM. A	LL DEVIATIONS, MINOR
FULL COMPLIANCE V THE MANUFACTURE RESPONSIBLE TO CON UNDERSTAND THE RI	ACT AWARD, THE CONTRACTOR SOLUTH MANUALS, SPECIFICATIONS, OF THIS CONTRACTED LANDING COMPLETELY SEARCH THESE MANUA EQUIREMENTS NECESSARY TO MASTORWARDED TO OO-ALC/LGHLEN.	AND STANDARDS CALLED OU BEAR COMPONENT/ASSEMBLY LS, SPECIFICATIONS, AND STA	T AND REQUIRED FOR . CONTRACTOR IS ANDARDS AND FULLY
24. AFTER CONTRAC DOCUMENTATION (R BEFORE PRODUCTION	T AWARD, THE SUCCESSFUL BIDD OUTING DOCUMENTS AND PROCES N BEGINS.	ER SHALL PROVIDE A COPY OF SS SPECIFICATIONS) TO LGHLE	F THE PROCESSING EN FOR FINAL REVIEW
	ALL BE PROCURED FROM THE ORI PROCEDURES AND DIES/TOOLING.		NG THE ORIGINAL
THE FORGING SOURCE AVAILABLE AND THE	TRACT AWARD, THE DETAILED PA E, TO THE GOVERNMENT THAT THE FORGING SOURCE HAS AN AGREE USE IN THE EVENT THEY ARE TH	HE CERTIFIED DIES AND PROC EMENT WITH THE DETAIL PAR	EDURES ARE
PREPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	5 Nov 02

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REV:	ENGINEERING D	ATA REQUIREMENTS CONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER	1	NATIONAL STOCK NUMBER	
2007644-103		1620-01-259-0559	
THE FORGING DRAW FORGINGS. THE DET	OUCTION, FORGING LOT QUALIFIC ING AND SAE AMS-F-7190 FOR STE PAILED PART CONTRACTOR SHALL TE AND SHALL SUBMIT CERTIFIED	EL FORGINGS AND SAE AMS-A . ASSURE THAT THIS HAS BEEN	-22771 FOR ALUMINUM I ACCOMPLISHED BY
26. FORGING SOURC	E, CONTROL OF FORGING DIES, AN	ND THE LOCATION OF DIES:	
A. FORGING DRA	WING: 2007744		
B. CONTROL OF	DRAWING PROCESS: GOODRICH		
C. LOCATION OF	FORGING DIES:		
W. PAT CROW INC 200 LUXTON STRE P.O. BOX 1720 FT. WORTH, TX 76 (817) 536-2861 CAGE: 94790 DIE # 3738	ET SIFCO FORO 970 E 64TH	GE GROUP STR ND, OH 44103 600	
KROPP FORGE CO A DIVISION OF AN 5301 W. ROOSEVE CHICAGO, IL 60650 (312) 242-1900 DIE # 7860	LT RD		
27. INSTALL BUSHIN	GS PER THE FOLLOWING IN LIEU (	OF MM5743:	
TO THE FINISH ON THE O.D. OF THE BUILDING PRESS OR HAMMER I	INSTALLATIONS SHALL BE ACCOMED INDICENSING INTO WHE I.D. OF THE HOUSING INTO WHE SHING. FORCED INSTALLATION OF SOME PERMITTED, AND IS NOT ACE BUSHING INTO ALIGNMENT WITH	ICH THE BUSHING IS INSTALLE F SUB-ZERO INSTALLATIONS, S CCEPTABLE. A SMALL NON-MI	ED, OR THE FINISH OF SUCH AS THE USE OF A ETALLIC HAMMER MAY
	ING INSTALLATION, THE PARTS A TO REMOVE ALL CONTAMINATIO		CLEANED WITH A
SUB-ZERO COOLANT	GEN SHALL BE USED FOR ALL SUB IS SPECIFIED, AND APPROVED BY E LIQUID NITROGEN SHALL BE SUB E AS THE COOLANT.	OO-ALC/LILEC ENGINEERING.	THE SOAK TIME OF
PREPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	5 Nov 02

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OF 4

REV:	ENGINEERING DA	TA REQUIREMENTS CONTINUATION S	SHEET
		(ATTACHMENT "A")	
PART NUMBER		NATIONAL STOCK NUMBER	
2007644-103		1620-01-259-0559	
COOLANT WITH AN A	HALL BE INSTALLED INTO THE HOUBSOLUTE MINIMUM OF LOST TIME MIZE INSTALLATION TIME WHICH	E. TRIAL RUNS SHALL BE ACC	OMPLISHED AS
INSTALLED, IN ADDIT HAVE PAINT OR SEAL BE HEATED BY THE U ETC.; TO THE MAXIM MONITOR HEAT AND	ONALLY BE NECESSARY TO HEAT FION TO SUB-ZERO COOLING OF TH ANT OR OTHER ORGANIC MATERIA ISE OF RADIANT HEAT TECHNIQUE UM TEMPERATURE OF 250 F. TEM SHALL BE LOCATED ON AREAS OF SCALING, OXIDATION, OR CORROS	IE BUSHING. DETAIL PARTS IN AL APPLIED PRIOR TO HEATIN SS, SUCH AS THERMAL BLANK IPERATURE MEASURING DEVI THE PART EXPECTED TO REA	N PROCESS WILL NOT IG, THE PARTS SHALL ETS, INFRARED LAMPS CES SHALL BE USED TO
LIGHT COAT OF SEAL	HOUT FLANGES SHALL BE INSTALL ANT PER MIL-PRF-81733. INSTALL HAVE EXTRUDED AROUND THE PI	SHRUNKEN BUSHING AND WI	PE OFF ANY EXCESS
SEALANT SHALL ALSO A MANNER AS TO ENSINSTALLED. WIPE OF	H FLANGES SHALL BE INSTALLED OF BE APPLIED TO FACE OF LUG UN SURE COMPLETE COVERAGE OF INFORM ANY EXCESS SEALANT AROUND FER END OF BUSHING ALSO.	IDER FLANGE. SEALANT SHAI SIDE FACE OF BUSHING FLAN	LL BE APPLIED IN SUCH GE WHEN BUSHING IS
	WITH EXTERNAL GREASE GROOVED BUSHING INSTALLATION AND FA		
			,
PREPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	5 Nov 02

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-259-0559</u> NOUN: <u>Cylinder Assy</u> PART NUMBER (P/N)2007644-103 AIRCRAFT:F-16

#### SECTION C

#### QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N \_2007644-103 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-259-0559

NOUN: Cylinder Assy

PART NUMBER (P/N)<u>2007644-103</u> AIRCRAFT:F-16

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2000.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	<b>REVISION:</b>	: 02					 	Z	ENGINEERING DATA	LIST	*	* HISTORY *
DATE:		DATA TECH:	SCH		ORGN SYMBOL	SYMB(		ı	LGMPM PR NR:		APPLICATION: F-16	PAGE 1 OF 1
CAGE: 13002		MANUFACTÜRER NAME: GOODRICH					<u> </u>	3FER 30710	REFERENCE NR: 2007106-103	NOUN: OUTER SHO	NOUN: OUTER SHOCK STRUT, PISTON ASSY	NSN : 1620012531350
CAGE	DRAWING NUMBER	NUMBER		REVS	REV SHEETS CARDS CODE CODE	NR	FURN D	ODE	NOUN		REQUIREMENTS	
3966	39661 MM4990		\		0000	0000	S	=	HEAT TREAT SPECIFICATION			
39661	51 MM5542		-		0000	0000	တ	۲	CADMIUM PLATE SPECIFICATION			
9874	98747 00-ALC FORM 462		\		4000	0000	S	l tel	ENGR DATA ROMTS (ATTACH A)			3
1757	17576 2006404-263		-	Ħ	1000	0000	co.	-	BUSHING SLEEVE - LANDING GEAR			
1757	17576 2007106		\	Ω	1000	0000	ຶນ	4	PISTON ASSY, OUTER - SHOCK STR			
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1757	17576 2007256		\		1000	0000	S	14	PISTON, OUTER - MLG FORGING OF			
1757	17576 2007404-41		\	m	1000	0000	ω	<del> </del>	BUSHING, SLEEVE - LANDING GEAR			
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STA	STANDARD ENGINEERING TEXT	ING TEXT										
Ä	ENGINEERING DATA LIST REMARKS	LIST REMARKS							FURNISHED METHOD CODE LEGEND:	×	- DATA SUPPLIED (NOT IN EDCARS).	G - GOV'T DOCUMENT.
									C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION	SOLICITATION. P	- FURNISHED BY PCD UPON REQUEST. - PARTIAL DOCUMENT FURNISHED.	O - OTHERS, CONTRACTOR MUST ACQUIRE.
									M - STABLE BASE DRAWING REQUIRED;		- VENDOR DRAWING;	A - DATA NOT
-										INTERNIT	ANT WIT COLUMN TO THE PARTY OF	317311 4016

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REV:	ENGINE	ERING DATA REQUIREMENTS	
		(ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATION	l ONS I/STANDARDS WILL NOT BE FURNISHED IN TH	HE BID SET.	
	IONS ARE FURNISHED FOR THE MANUFACTURE O	OF .	
PISTON ASSY, OU	TER - SHOCK STRUT, MLG		
2. PART NUMBER		3. NATIONAL STOCK NUMBER	
2007106-103		1620-01-253-1350	
4. THE FOLLOWING SPECIFICATION FURNISHED UNLESS SO INDICATION OF THE PROPERTY	ATIONS/STANDARDS, ETC., WILL BE USED IN LIEU ATED.	OF THE DATA INDICATED. THE SUPERSEL	DED DATA WILL NOT BE
5. PER FLAG NOTE 1, MIL-S-8844.	DRAWING 2007106 AND FLAG NOT	E 4, DRAWING 2007256 USE SA	E AMS 6257 IN LIEU OF
6. HEAT TREAT PER	SAE AMS-H-6875, MM4990 IN LIEU O	F MIL-H-6875.	
TREAT, SHALL BE INS	TREATED TO 180 KSI AND ABOVE, SPECTED FOR ABUSIVE GRINDING/NTD-866 IN LIEU OF MM5759.		
DIRECT CURRENT (FV ACCEPTANCE/REJECT THAT THE INSPECTION INDICATIONS ALLOW	TIC PARTICLE INSPECTION PER AST WDC), WET CONTINUOUS METHOD, TION CRITERIA: NO DEFECTS ALLO ON IS CONDUCTED AT THE REQUIRE VED. THE INSPECTOR PERFORMING ON PROCEDURE DEVELOPED BY A L	FLUORESCENT TYPE WITH TO OWED. THE INTENT OF NO DE ED SENSITIVITY LEVEL AND T THE INSPECTION SHALL BE C	HE FOLLOWING EFECTS ALLOWED IS HERE SHALL BE NO CERTIFIED TO LEVEL II
9. SHOT PEEN PER SA	AE AMS-S-13165 IN LIEU OF MIL-S-13	3165.	
	1M4951 CADMIUM PLATING WILL N NATE USE SPECIFICATION MM5542		•
11. DIMENSIONING A	ND TOLERANCING PER ASME Y14.5	5 IN LIEU OF ANSI Y14.5.	
0.004" - 0.007" DEEP IN OO-ALC/LGHLEN SHA ACCOMPLISHED AS FOUNDED ON THE CONBY A DASH AND A SEINTERMITTENT CONTOF THE PRIOR CONTI	SHALL BE VIBROPEENED (WITH VIIN THE LOCATION INDICATED. IF TO ALL PROVIDE S/N LOCATION INSTRUCTIONS: THE SERIALIZATION SHATRACT, FOLLOWED BY A DASH AN EQUENTIALLY UNIQUE 3 DIGIT NUMBERS SHALL START SERIALIZATION SERIAL NUMBERS. THE SERIAL SERIAL NUMBERS SERIAL SERI	HE DRAWING DOES NOT INDIC UCTIONS. SERIALIZATION OF ALL BEGIN WITH THE CAGE O TO THE 2 DIGIT YEAR OF MAN MBER. A CONTRACTOR WHO I ION OF ITEM WITH THE NEXT MORE THAN 999 ITEMS, THE S	CATE A LOCATION, ITEM SHALL BE F THE CONTRACTOR UFACTURE, FOLLOWED RECEIVES NUMEROUS NUMBER IN SEQUENCE SERIAL NUMBER
13. CORROSION PRO	TECTION PER MIL-C-16173 GRADE 1	OR MIL-C-11796 CLASS 1 OR 2	IN LIEU OF MM5752.
14. IDENTIFICATION	AND MARKING PER MIL-STD-130 IN	LIEU OF TM1040.	
15. SURFACE TEXTU	RE PER ASME B46.1 IN LIEU OF ASA	3 B46.1.	
16. CHROME PLATE	TO DRAWING REQUIREMENTS AND	SAE AMS-QQ-C-320 IN LIEU O	F QQ-C-320.
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REV:	ENGINEERING DAT	A REQUIREMENT	1661
PART NUMBER	<u> </u>	NATIONAL STOCK NUMBER	
2007106-103		1620-01-253-1350	
PLATING) TO ALL BU	NIFORM COATING OF PRIMER PER M SHING BORES AND ALLOW TO FULL OBSTRUCT GREASE PASSAGES).	IL-PRF-23377 OR MIL-PRF-8558 Y CURE PRIOR TO INSTALLAT	2 (AFTER CADMIUM ION OF BUSHING
18. INSTALL BUSHING	GS PER THE FOLLOWING IN LIEU OF	MM5743:	
TO THE FINISH ON THE O.D. OF THE BUS PRESS OR HAMMER IS	INSTALLATIONS SHALL BE ACCOMP HE I.D. OF THE HOUSING INTO WHIC SHING. FORCED INSTALLATION OF S NOT PERMITTED, AND IS NOT ACC BUSHING INTO ALIGNMENT WITH	THE BUSHING IS INSTALLEI SUB-ZERO INSTALLATIONS, SU EPTABLE. A SMALL NON-ME	D, OR THE FINISH OF JCH AS THE USE OF A FALLIC HAMMER MAY
	HING INSTALLATION, THE PARTS AN TO REMOVE ALL CONTAMINATION		CLEANED WITH A
SUB-ZERO COOLANT	GEN SHALL BE USED FOR ALL SUB-Z IS SPECIFIED, AND APPROVED BY C ELIQUID NITROGEN SHALL BE SUFF E AS THE COOLANT.	O-ALC/LILEC ENGINEERING.	THE SOAK TIME OF
COOLANT WITH AN A	SHALL BE INSTALLED INTO THE HO ABSOLUTE MINIMUM OF LOST TIME MIZE INSTALLATION TIME WHICH S	. TRIAL RUNS SHALL BE ACCO	OMPLISHED AS
INSTALLED, IN ADDI HAVE PAINT OR SEA BE HEATED BY THE ETC.; TO THE MAXIN MONITOR HEAT AND	SIONALLY BE NECESSARY TO HEAT ITION TO SUB-ZERO COOLING OF TH LANT OR OTHER ORGANIC MATERIA USE OF RADIANT HEAT TECHNIQUE MUM TEMPERATURE OF 250 F. TEM SHALL BE LOCATED ON AREAS OF SCALING, OXIDATION, OR CORROSI	IE BUSHING. DETAIL PARTS IN AL APPLIED PRIOR TO HEATIN S, SUCH AS THERMAL BLANKI IPERATURE MEASURING DEVIO THE PART EXPECTED TO REA	PROCESS WILL NOT G, THE PARTS SHALL ETS, INFRARED LAMPS CES SHALL BE USED TO
LIGHT COAT OF SEA	ITHOUT FLANGES SHALL BE INSTAL LANT PER MIL-PRF-81733. INSTALL Y HAVE EXTRUDED AROUND THE PI	SHRUNKEN BUSHING AND WIL	PE OFF ANY EXCESS
SEALANT SHALL AL A MANNER AS TO EN INSTALLED. WIPE O	TH FLANGES SHALL BE INSTALLED SO BE APPLIED TO FACE OF LUG UN NSURE COMPLETE COVERAGE OF IN OFF ANY EXCESS SEALANT AROUND HER END OF BUSHING ALSO.	IDER FLANGE. SEALANT SHAI SIDE FACE OF BUSHING FLAN	LL BE APPLIED IN SUCH GE WHEN BUSHING IS
MIL-C-16173 PRIOR T	S WITH EXTERNAL GREASE GROOV O BUSHING INSTALLATION AND FA USHING IS FLANGED.	ES THE INSIDE OF THE LUG WI CE OF LUG WILL BE COATED V	ILL BE COATED WITH WITH MIL-PRF-81733 PER
PREPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	24apr 03
OO-ALC FORM 462 OCT	96 (EF-V1) (PerFORM PRO)		PAGE 2 OF 4

ENGINEERING DATA REQUIREMENT . JONTINUATION SHEET (ATTACHMENT "A")
NATIONAL STOCK NUMBER
1620-01-253-1350
!:

- A. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377.
- B. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PE FED-STD-595 IN LIEU OF MIL-C-83286.
- 20. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4, IN LIEU OF MIL-I-6866, WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN AIA/NAS NAS-410.
- 21. CADMIUM PLATE TO DRAWING REQUIREMENTS AND SAE AMS-QQ-P-416 IN LIEU OF QQ-P-416.
- 22. PER DRAWING 2006404-263 USE MATERIAL SAE AMS 4640 IN LIEU OF AMS 4640.
- 23. CLEANLINESS PER SAE AMS 2300 IN LIEU OF AMS 2300.
- 24. OO-ALC/LGHLEN SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MATERIAL REVIEW BOARD (MRB'S) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.
- 25. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY **QUESTIONS CAN BE FORWARDED TO OO-ALC/LGHLEN.**
- 26. THE REQUIRED FORGING WILL BE PROCURED FROM THE QUALIFIED FORGING SOURCE USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.
- A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PART BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.
- B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.

PREPARED BY	SYMBOL	DATE
CAROL HYER	LGMPM	24 apr 03
OO-ALC FORM 462, OCT 96 (FF-V1) (PerFORM PRO)		PAGE 3 OF 4

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REV:	EN	GINEERING DATA REQUIREMENT & A		Т
PART NUMBER		NATIONAL STOCK NUM	<b>MBER</b>	
2007106-103		1620-01-253-13	350	
27. FORGING SOURC	E, CONTROL AND LOCA	TION OF DIES:		
A. FORGING DRA	WING: 2007256-1			
B. CONTROL OF F	ORGING PROCESS: USA	F		
C. LOCATION OF	FORGING DIES:			
SIFCO IND., INC. SIFCO FORGE GRO 970 EAST 64TH STE CLEVELAND, OH 4 PHONE: 216-881-86 POC: MARILYN IF DIE # 10823	R 14103-1620 500			
W. PAT CROW, IF 200 LUXTON STR P.O. BOX 1720 FT. WORTH, TX 76 PHONE: 817-536-28 POC: LAURA RIVI DIE # 3735	.101-1720 361 X280			
				·
PREPARED BY		SYMBOL	DATI	
CAROL HYER		LGMPM	j.	4 apr 03

# SOURCE QUALIFICATION REQUIREMENTS (PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-253-1350</u> NOUN: <u>Outer Shock Strut - Piston Assy</u> PART NUMBER (P/N)<u>2007106-103</u> AIRCRAFT:F-16

#### SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2007106-103 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-253-1350</u> NOUN: <u>Outer Shock Strut - Piston Assy</u> PART NUMBER (P/N)2007106-103 AIRCRAFT:F-16

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2000.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a prequalification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION:	10	ĺ					K	ENGINEERING	DATA LIST			*	* HISTORY *	
DATE:	II .	DATA TECH:	SCH	<b> </b>	ORGN SYMBOL:	YMB	2 <b>.</b> :	2	LGMPM	PR NR :		APPLICATION: F-16 H/W		PAGE 1 OF	
CAGE: 13002	E MANUFACTURER NAME: 2 GOODRICH	J URER NAME:		1				REFERENCE 2007101-103	REFERENCE NR: 2007101-103		NOUN: PISTON, L	NOUN : PISTON, LANDING GEAR		NSN: 1620012523344	
CAGE	DRAWING NUMBER	NUMBER	H	REV SH	NR FURN DIST SHEETS CARDS CODE CODE	NR	FURN D	IST	NOUN			REQUIREMENTS	ķ		
39661	39661 MMD10009		-	l°	0000	0000	S	S	SWAGING SPECIFICATION						
39661	39661 MM4990	,	+	l°	0000	0000	S	呈	HEAT TREAT SPECIFICATION	NO					
39661	39661 MM5542		$\vdash$	l°	0000	0000	S	0	CADMIUM PLATING SPECIFCATION	CATION					-
39661	39661 MM5743	,		l°	0000	0000	S	H	INSTALLATION OF BEARINGS SPEC	IGS SPEC					
17576	17576 MM5752			l°	0000	0000	s	0	CORROSION PROTECTION SPEC	PEC					
39661	39661 MMS754			l°.	0000	0000	S	S	SWAGING SPECIFICATION						
17576	17576 MM5759			L	0000	0000	S	U U	GRIND SPECIFICATION						
98747	98747 00-ALC FORM 462		_	ľ	0002	0000	S	i iii	ENGR DATA ROMTS (ATTACH A)	н А)					
17576	17576 TM1040		-	l°	0000	0000	ν <sub>2</sub>		IDENTIFY & MARKING SPEC	30					
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17576	17576 2007102	,		0	1000	0000	s	_	BEARING, SPHERICAL - S	- SHOCK STRUT					
17576	17576 2007251	ì		-	1000	0000	S	<u> </u>	PISTON, INNER - MLG FORGING OF	ORGING OF	:				
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Ë	ENGINEEKING DATA LIST KEMAKKS	LIST REMARKS							C - CLASS C - CLASS S - FURNI M - STABL	C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED;	ON. RED;		ON REQUEST.		RACTOR
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REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")						
NOTE: MILITARY SPECIFICATION	NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.  1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF						
PISTON ASSY, INNER - MLG SHOCK STRUT							
2. PART NUMBER		3. NATIONAL STOCK NUMBER					
2007101-103		1620-01-252-3344					
	4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.						
5. PER DRAWING 2007101 AND 2007251,USE MATERIAL AMS 6414, AMS 6257 IN LIEU OF MIL-S-8844.							
6. HEAT TREAT PER S	SAE AMS-H-6875 IN LIEU OF MIL-H-6	875.					
7. FOR PARTS HEAT TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866 OR MM5759.							
8. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165.							
9. SPECIFICATION MM4951 CADMIUM PLATING WILL NOT BE FURNISHED AS IT IS LIMITED (PROPRIETARY) DATA. AS AN ALTERNATE USE SPEC MM5542, CADMIUM PLATING. (PROVIDED)							
10. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION WILL BEGIN WITH THE CAGE OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS WILL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-03-001".							
11. PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444, IN LIEU OF MIL-I-6868. USE FULL WAVE DIRECT CURRENT (FWDC), AND WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN AIA/NAS NAS-410.							
12. PAINT ALL SURFACES EXCEPT AS NOTED ON DRAWING, PER THE FOLLOWING:							
A. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377.							
B. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR #17925 (WHITE) PER FED-STD-595 IN LIEU OF MIL-C-83286.							
13. CORROSION PROTECTION PER MIL-C-16173 GRADE 1, MIL-C-11796 CLASS 1 OR 2 OR MM5752.							
14. IDENTIFICATION AND MARKING PER MIL-STD-130 OR TM1040.							
15. PER DRAWING 2007102,USE MATERIAL ASTM B196 IN LIEU OF QQ-C-530.							
16. DIMENSIONS AND TOLERANCING PER ASME Y14.5 IN LIEU OF ANSI Y14.5.							
PREPARED BY		SYMBOL	DATE 18 Mar 03				
CAROL HYER	OOT OC (FF VAlva Foots and)	LGMPM	10 14141 03				

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REV:	1/	ENGINEERING DAT	A REQUIREMENT "A")	INUATION SE	HEET	
PART NUMBER		1	NATIONAL STOCK NUMBER			
2007101-103			1620-01-252-3344			
17. SURFACE TEXTU	RE PER ASME B46.1 IN	I LIEU OF ASA I	346.1.			
18. PER DRAWING 2007251, CLEANLINESS PER SAE AMS 2300 IN LIEU OF AMS 2300.						
19. CHROME PLATE 7	O DRAWING REQUIR	REMENTS AND S	SAE AMS-QQ-C-320 I	N LIEU OF	QQ-C-320.	
20. PERFORM FLUOR OR 4 IN LIEU OF MIL-ALLOWED. THE INTIREQUIRED SENSITIVI PERFORMING THE INDEVELOPED BY A LE	I-6866, WITH THE FOI ENT OF NO DEFECTS TY LEVEL AND THER SPECTION SHALL BE	LLOWING ACCE ALLOWED IS T RE SHALL BE NO CECERTIFIED TO	EPTANCE/REJECTION HAT THE INSPECTION INDICATIONS ALL LEVEL II WITH TH	N CRITERIA ON IS CONI OWED. TH	A: NO DEFECTS DUCTED AT THE IE INSPECTOR	
21. THE REQUIRED ORIGINAL CERTIFIED	FORGING WILL BE PI FORGING PROCEDU	ROCURED FROM RES AND DIES!"	I THE QUALIFIED FOOLING.	ORGING SC	OURCE USING THE	
A. PRIOR TO CON FORGING SOURCE, TO AVAILABLE AND THA PROVIDE FORGINGS	AT THE FORGING SOU	THAT THE CEI JRCE HAS AN A	RTIFIED DIES AND F GREEMENT WITH T	ORGING P THE DETAIL	ROCEDURES ARE L PART BIDDER TO	
B. PRIOR TO PROI FORGING DRAWING A ACCOMPLISHED BY T ACCOMPLISHMENT T	AND MIL-F-7190. THI THE FORGING SOURC	E CONTRACTOR E AND WILL SU	WILL ASSURE THA	T THIS IS C		
22. FORGING SOURC	E, CONTROL AND LO	CATION OF DIE	ES:			
A. FORGING DRA	WING: 2007251-1					
B. CONTROL OF FORGING PROCESS: UNKNOWN						
C. LOCATION OF	FORGING DIES:					
CANTON DROP FO 4575 SOUTHWAY S P.O. BOX 6902 CANTON, OH 4470 POC: JOHN MOTS 330-477-4511 DIE # 6422	7 ST. SW P.O. BOX 1720 FORT WORTH, TX 76101-1720 706-0902 817-536-2861					
				,,,,		
PREPARED BY			SYMBOL		DATE	
CAROL HYER			LGMPM		18 Mar 03	

REV:	ENGINEERING DAT	A REQUIREMENTS CONTINUATION SH	łeet					
		•						
PART NUMBER		NATIONAL STOCK NUMBER 1620-01-252-3344						
2007101-103		1620-01-252-3344						
23. OO-ALC/LGHLEN SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MATERIAL REVIEW BOARD'S (MRB'S) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.								
24. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO OO-ALC/LGHLEN.  25. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING								
DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LGHLEN FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.								
PREPARED BY		SYMBOL	DATE					
CAROL HYER		LGMPM	18 Mar 03					
L			PAGE 3 OF 3					

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-252-3344 NOUN: Piston Landing Gear MLG PART NUMBER (P/N)2007101-103 AIRCRAFT:F-16

#### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2007101-103 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-252-3344</u> NOUN: Piston Landing Gear MLG PART NUMBER (P/N)2007101-103 AIRCRAFT:F-16

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$1000.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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	TO COLOR						II		- 11	1017		" HISTORY "
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CAGE: 13002	E: MANUFACTURER NAME 2 GOODRICH	JRER NAME:					2 RE	REFERENCE 2006106-109	REFERENCE NR: 2006106-109	NOUN: PISTON,	NOUN: PISTON, LANDING GEAR	NSN: 1620014420167
CAGE	DRAWING NUMBER	NUMBER	<b>K</b>	REV SHE	NR NR FURN DIST SHEETS CARDS CODE CODE	NR F	URIN D	IST	NOUN		REQUIREMENTS	
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EŇ	ENGINEERING DATA LIST REMARKS	IST REMARKS							FURNISHED METHOD CODE LEGEND:  C - CLASSIFIED DOCUMENT,  S - FURNISHED WITH SOLICITATION,  M - STABLE BASE DRAWING REQUIRED;	GEND: ITATION. REQUIRED;	<ul> <li>X - DATA SUPPLIED (NOT IN EDCARS).</li> <li>R - FURNISHED BY PCD UPON REQUEST.</li> <li>P - PARTIAL DOCUMENT FURNISHED.</li> <li>V - VENDOR DRAWING;</li> </ul>	G - GOV'T DOCUMENT.  C. O - OTHERS, CONTRACTOR  MUST ACQUIRE.  A - DATA NOT
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REV:	ENGINEERING DATA REQUIREME	:NTS
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURN  1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANU		
PISTON ASSY, OUTER - SHOCK STRUT, ML		
2. PART NUMBER	3. NATIONAL STOCK NUMBER	
2006106-109	1620-01-442-0167	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE US FURNISHED UNLESS SO INDICATED.	SED IN LIEU OF THE DATA INDICATED. THE SU	JPERSEDED DATA WILL NOT BE
5. MATERIAL REF: 7049-T73 AL ALLOY PER SAE	AMS-QQ-A-367 IN LIEU OF QQ-A-	-367. (REF DWG 2006106)
6. PERFORM FLUORESCENT PENETRANT INSPECT 4 IN LIEU OF MIL-I-6866, WITH THE FOLLOWING THE INTENT OF NO DEFECTS ALLOWED IS THAT SENSITIVITY LEVEL AND THERE SHALL BE NO INSPECTION SHALL BE CERTIFIED TO LEVEL II VIII AS SPECIFIED IN NAS-410.	ACCEPTANCE/REJECTION CRITE T THE INSPECTION IS CONDUCTE NDICATIONS ALLOWED. THE INS	RIA: NO DEFECTS ALLOWED. ED AT THE REQUIRED SPECTOR PERFORMING THE
7. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF	MIL-S-13165.	
8. CORROSION PROTECTION PER MIL-C-16173 GR	RADE 2 OR MIL-C-11796 CLASS 3 II	N LIEU OF MM5752.
9. IDENTIFICATION AND MARKING PER MIL-STI	D-130 IN LIEU OF TM1040.	
10. ULTRASONIC INSPECTION PER MIL-STD-2154	TYPE I, CLASS A IN LIEU OF MIL	I-8950, CLASS A.
11. PAINT PER DRAWING REQUIREMENTS AS FO	DLLOWS:	
A. APPLY ONE COAT EPOXY WATERBORNE MIL-P-23377. ALTERNATE ONE COAT OF EPOXY	•	•
B. APPLY TWO TOPCOATS POLYURETHANE PER FED-STD-595, IN LIEU OF MIL-C-83286, WHIC		OR NUMBER 17925 (WHITE)
12. SERIAL NUMBER SHALL BE VIBROPEENED (V 0.004" - 0.007" DEEP IN THE LOCATION INDICATE OO-ALC/LGHLEN SHALL PROVIDE S/N LOCATION ACCOMPLISHED AS FOLLOWS: THE SERIALIZAT CONTRACTOR NAMED ON THE CONTRACT, FOLMANUFACTURE, FOLLOWED BY A DASH AND A WHO RECEIVES NUMEROUS INTERMITTENT CONNEXT NUMBER IN SEQUENCE OF THE PRIOR CONTHE SERIAL NUMBER SHOULD BEGIN USING 4 DAPPEAR LIKE THIS: "S/N 98747-02-001".	ED. IF THE DRAWING DOES NOT IN INSTRUCTIONS. SERIALIZATION IN INSTRUCTIONS. SERIALIZATION IN INTHE CALLOWED BY A DASH AND THE 2 DEQUENTIALLY UNIQUE 3 DIGIT INTRACTS SHALL START SERIALIZ INTRACT. IF A CONTRACT PRODU	INDICATE A LOCATION, ON OF ITEM SHALL BE GE (FSCM) OF THE DIGIT YEAR OF NUMBER. A CONTRACTOR ZATION OF ITEM WITH THE UCES MORE THAN 999 ITEMS,
13. MATL: AL BRONZE PER SAE AMS 4640 IN LIE	EU OF AMS 4640. (REF DWG 20064	104-263)
14. CADMIUM PLATE PER SAE AMS-QQ-P-416 IN	LIEU OF QQ-P-416.	
15. MATL: 17-4PH CRES, COND H1150, PER SAE	AMS 5643 IN LIEU OF AMS 5643.	(REF DWG 2006404-265)
PREPARED BY	SYMBOL	DATE
CAROL HYER	LGMPM	5 Nov 02

REV:	ENGINEERING DA	TA REQUIREMEN CONTINUATION	SHEET
		(ATTACHMENT "A")	
PART NUMBER		NATIONAL STOCK NUMBER	
2006106-109			
2000100-109	,	1620-01-442-0167	
(ZONE A-5) PER MIL-A FLAGNOTE #4 SHALL INCHES AFTER HARD	DRMATION PER LILE ENGINEER - H -8625 TYPE III, CLASS I IN LIEU OF APPLY PRIOR TO HARD ANODIZE ( ANODIZE WITH A 32 RMS FINISH.	FLAGNOTE #5 (CONVENTION COATING AND FINISH DIAMET	AL ANODIZE).
17. INSTALL BUSHING	SS PER THE FOLLOWING IN LIEU O	F MM5743 TYPE III & IV:	
TO THE FINISH ON TH THE O.D. OF THE BUS PRESS OR HAMMER IS	NSTALLATIONS SHALL BE ACCOM E I.D. OF THE HOUSING INTO WHICH HING. FORCED INSTALLATION OF NOT PERMITTED, AND IS NOT ACCEPTION OF THE BUSHING INTO ALIGNMENT WITH	CH THE BUSHING IS INSTALLE SUB-ZERO INSTALLATIONS, S CEPTABLE. A SMALL NON-MI	ED, OR THE FINISH OF SUCH AS THE USE OF A ETALLIC HAMMER MAY
	ING INSTALLATION, THE PARTS AITO REMOVE ALL CONTAMINATION		CLEANED WITH A
SUB-ZERO COOLANT I	EN SHALL BE USED FOR ALL SUBS S SPECIFIED, AND APPROVED BY C LIQUID NITROGEN SHALL BE SUFF AS THE COOLANT.	OO-ALC/LGHLEN ENGINEERIN	G. THE SOAK TIME OF
COOLANT WITH AN A	HALL BE INSTALLED INTO THE HOBSOLUTE MINIMUM OF LOST TIME MIZE INSTALLATION TIME WHICH S	E. TRIAL RUNS SHALL BE ACC	OMPLISHED AS
INSTALLED, IN ADDIT HAVE PAINT OR SEAL BE HEATED BY THE U ETC.; TO THE MAXIM MONITOR HEAT AND	ONALLY BE NECESSARY TO HEAT TON TO SUB-ZERO COOLING OF TH ANT OR OTHER ORGANIC MATERIA SE OF RADIANT HEAT TECHNIQUE UM TEMPERATURE OF 250 F. TEM SHALL BE LOCATED ON AREAS OF CALING, OXIDATION, OR CORROSI	HE BUSHING. DETAIL PARTS IN AL APPLIED PRIOR TO HEATINGS, SUCH AS THERMAL BLANK IPERATURE MEASURING DEVING THE PART EXPECTED TO REA	N PROCESS WILL NOT IG, THE PARTS SHALL ETS, INFRARED LAMPS CES SHALL BE USED TO
LIGHT COAT OF SEAL	OUT FLANGES SHALL BE INSTALLE ANT PER MIL-PRF-81733. INSTALL HAVE EXTRUDED AROUND THE PE	SHRUNKEN BUSHING AND WI	PE OFF ANY EXCESS
SEALANT SHALL ALSO A MANNER AS TO ENS INSTALLED. WIPE OF	H FLANGES SHALL BE INSTALLED IN BE APPLIED TO FACE OF LUG UN UNFURE COMPLETE COVERAGE OF INFORM FANY EXCESS SEALANT AROUND IN END OF BUSHING ALSO.	IDER FLANGE. SEALANT SHA SIDE FACE OF BUSHING FLAN	LL BE APPLIED IN SUCH GE WHEN BUSHING IS
		,	
PREPARED BY		SYMBOL	DATE
CAROL HYER	ļ	LGMPM	5 Nov 02
00-ALC FORM 462, OCT 9	6 (EF-V1) (PerFORM PRO)		PAGE 2 OF 4

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REV:	ENGINEERING DA	TA REQUIREMENT	CONTINUATION :	SHEET	
PART NUMBER		NATIONAL STOCK NU	JMBER		
2006106-109 ,		1620-01-442	2-0167		
H. FOR BUSHINGS WITH EXTERNAL MIL-C-16173 PRIOR TO BUSHING INSTA PARAGRAPH G, IF BUSHING IS FLANGI	LLATION AND FA			· · · · · · · · · · · · · · · · · · ·	
18. OO-ALC/LGHLEN SYSTEM ENGINE REVIEW BOARD (MRB'S) DISPOSITIONS AND MAJOR, FROM THE ENGINEERING	S PRIOR TO SHIPM	ENT OF DISCREI	PANT ITEM. A	LL DEVIATIONS, MINOR	
19. PRIOR TO CONTRACT AWARD, THE FULL COMPLIANCE WITH MANUALS, THE MANUFACTURE OF THIS CONTRACT RESPONSIBLE TO COMPLETELY SEARCH UNDERSTAND THE REQUIREMENTS NOT THE REQUIREMENTS OF THE PROPERTY OF THE PROPE	SPECIFICATIONS, CTED LANDING G CH THESE MANUA ECESSARY TO MAI	AND STANDARD EAR COMPONED LS, SPECIFICATI	S CALLED OU NT/ASSEMBLY IONS, AND STA	T AND REQUIRED FOR CONTRACTOR IS NDARDS AND FULLY	
20. AFTER CONTRACT AWARD THE SUDOCUMENTATION (ROUTING DOCUMENTS) BEFORE PRODUCTION BEGINS.					
21. THE FORGING SHALL BE PROCURE CERTIFIED FORGING PROCEDURES AN			SOURCE, USIN	NG THE ORIGINAL	
A. PRIOR TO CONTRACT AWARD, THE FORGING SOURCE, TO THE GOVE AVAILABLE AND THE FORGING SOURCE FORGINGS FOR THEIR USE IN THE EVI	RNMENT THAT TH CE HAS AN AGREE	IE CERTIFIED DI EMENT WITH TH	ES AND PROCI E DETAIL PAR	EDURES ARE	
B. PRIOR TO PRODUCTION, FORGIN THE FORGING DRAWING AND SAE AM FORGINGS. THE DETAILED PART CON THE FORGING SOURCE AND SHALL SU GOVERNMENT.	S-F-7190 FOR STEE TRACTOR SHALL	EL FORGINGS AN ASSURE THAT T	ID SAE AMS-A- HIS HAS BEEN	22771 FOR ALUMINUM ACCOMPLISHED BY	
22. FORGING SOURCE, CONTROL AND	LOCATION OF DI	ES:			
A. FORGING DRAWING: 2006256-	-7				
B. DIE # 4902					
C. CONTROL OF FORGING PROCESS: U.S.A.F.					
D. LOCATION OF FORGING DIES:	W. PAT CROW 200 LUXTON STR PO BOX 1720 FT. WORTH, TX 7 PHONE: 817-536-2				
PREPARED BY		SYMBOL	·	DATE	
CAROL HYER		LGMPM		5 Nov 02	

REV:	ENGINEERING	DATA REQUIREMENT: JONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER	<u></u>	NATIONAL STOCK NUMBER	
2006106-109	•	1620-01-442-0167	
		ER MIL-PRF-85582 TO ALL BUSHIN NG. (PRIMER SHALL NOT OBSTR	
			·
	•		
PREPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	5 Nov 02
OO-ALC FORM 462 OCT 9	96 (EF-V1) (PerFORM PRO)		PAGE 4 OF 4

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-442-0167</u> NOUN: PISTON, LANDING GEAR PART NUMBER (P/N)2006106-105 AIRCRAFT:F-16

### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2006106-105 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.
  - (a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-442-0167</u> NOUN: PISTON, LANDING GEAR PART NUMBER (P/N)2006106-105 AIRCRAFT:F-16

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$3,000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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CAGE: 13002	E: MANUFACTÜRER NAME 32 GOODRICH	JRER NAME:		1			REF 200	REFERENCE NR: 2006101-105		NOUN:	NOUN: SHOCK ABSORBER	NSN : 1620012964328
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39661	1 MMD10009		/	ō	0000	0000	တ	SWAGING, GROOVED BEARING	ARING SET			,
3966	39661 MM4990		_	٦	0000	0000	S	HEAT TREAT SPEC				
3966	39661 MM5527			٥	0000	0000	S	CHEMICAL MILL SPECIFICATION	CATION			
3966	39661 MMS542		_	Ō	0000	0000	S	CAD PLATE SPEC				
1757	17576 MM5752		_	ő	0000	0000	s	CORROSION PROTECTION SPEC	4 SPEC			
3966	39661 MM5754			ľ	0000	0000	S	SWAGING OF STEEL TUBULAR SPEC	JULAR SPEC			
1757	17576 MM5759		_	0	0000	0000	8	GRINDING SPECIFICATION	NOI			
9874	98747 00-ALC FORM 462		-	°	4000	0000	s	ENGR DATA ROMIS (ATTACH A)	CACH A)			
1757	17576 TM1040			°	0000	0000	s	IDENTIFICATION AND MARKING SPEC	ARKING SPEC			
1757	17576 2006101		_	Σ	1000	0000	s	PISTON ASSY, INNER -	- MLG SHK STR			
	/22245		-						BCD BCD			
1757	17576 2006102		_	ο U	0001	0000	s	BEARING, SPECIAL - SI	SHK STR, MLG			
1757	17576 2006251		\	ο υ	1000	0000	S	PISTON, INNE- MIG FORGING OF	ORGING OF			
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Ä	ENGINEERING DATA LIST REMARKS	JIST REMARKS						FURNISHE	FURNISHED METHOD CODE LEGEND:	END:	X - DATA SUPPLIED (NOT IN EDCARS)	RS). G - GOV'T DOCUMENT.
								C - CLAS S - FURN M - STAE	- CLASSIFIED DOCUMENT FURNISHED WITH SOLICITATION STABLE BASE DRAWING REQUIRED;	TATION. EQUIRED,	R - FURNISHED BY PCD UPON REQUEST P - PARTIAL DOCUMENT FURNISHED. V - VENDOR DRAWING;	SST. O - OTHERS, CONTRACTOR MUST ACQUIRE. A - DATA NOT

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	ONS I/STANDARDS WILL NOT BE FURNISHED IN TO IONS ARE FURNISHED FOR THE MANUFACTURE O			
.,	iER - MLG SHOCK STRUT			
2. PART NUMBER		3. NATIONAL STOCK NUMBER	· · · · · · · · · · · · · · · · · · ·	
2006101-105		1620-01-296-4328		
4. THE FOLLOWING SPECIFICA FURNISHED UNLESS SO INDICA	TIONS/STANDARDS, ETC., WILL BE USED IN LIEU TED.	OF THE DATA INDICATED. THE SUPERSEL	DED DATA WILL NOT BE	
5. USE MATERIAL SAI	E AMS 6257 IN LIEU OF MIL-S-8844.			
6. HEAT TREAT PER S	AE AMS-H-6875 IN LIEU OF MIL-H-	6875.		
	REATED TO 180 KSI AND ABOVE, A PECTED FOR ABUSIVE GRINDING/I D-866 OR MM5759.			
8. SHOT PEEN PER SA	E AMS-S-13165 IN LIEU OF MIL-S-13	3165.		
	M4951 CADMIUM PLATING WILL NO NATE USE SPECIFICATION MM5542		-	
10. CHROME PLATE T	O DRAWING REQUIREMENTS AND	SAE AMS QQ-C-320 IN LIEU OF	F QQ-C-320.	
0.004" - 0.007" DEEP IN OO-ALC/LGHLEN SHA ACCOMPLISHED AS FOR NAMED ON THE CONTBY A DASH AND A SECTION OF THE PRIOR CONTR	SHALL BE VIBROPEENED (WITH VII THE LOCATION INDICATED. IF TO LL PROVIDE S/N LOCATION INSTRU- DLLOWS: THE SERIALIZATION SHA FRACT, FOLLOWED BY A DASH AN QUENTIALLY UNIQUE 3 DIGIT NUM FRACTS SHALL START SERIALIZATI ACT. IF A CONTRACT PRODUCES IN G 4 DIGIT SERIAL NUMBERS. THE S	HE DRAWING DOES NOT INDIC UCTIONS. SERIALIZATION OF ALL BEGIN WITH THE CAGE OF D THE 2 DIGIT YEAR OF MANU IBER. A CONTRACTOR WHO R ON OF ITEM WITH THE NEXT MORE THAN 999 ITEMS, THE S	CATE A LOCATION, ITEM SHALL BE F THE CONTRACTOR JFACTURE, FOLLOWED RECEIVES NUMEROUS NUMBER IN SEQUENCE ERIAL NUMBER	
DIRECT CURRENT (FW ACCEPTANCE/REJECT THAT THE INSPECTIO INDICATIONS ALLOW	ETIC PARTICLE INSPECTION PER A VDC), WET CONTINUOUS METHOD, TON CRITERIA: NO DEFECTS ALLO N IS CONDUCTED AT THE REQUIRI ED. THE INSPECTOR PERFORMING N PROCEDURE DEVELOPED BY A L	, FLUORESCENT TYPE WITH TO DWED. THE INTENT OF NO DE ED SENSITIVITY LEVEL AND T IS THE INSPECTION SHALL BE C	HE FOLLOWING FECTS ALLOWED IS HERE SHALL BE NO CERTIFIED TO LEVEL II	
13. PAINT REQUIREMENTS AS FOLLOWS:				
	AT EPOXY PRIMER PER MIL-PRF-8 MIL-PRF-23377, TYPE I IN LIEU OF I		NATE ONE COAT OF	
B. APPLY TWO TO LIEU OF MIL-C-83286.	PCOATS PER MIL-PRF-85285, TYPE	I, COLOR NUMBER 17925 (WHI	TE) PER FED-STD-595 IN	
14. DIMENSIONING A	ND TOLERANCING PER ASME Y14.5	5 IN LIEU OF ANSI Y14.5.		
PREPARED BY		SYMBOL	DATE	
CAROL HYER		LGMPM	24 Apr 03	

REV:	ENGINEERING DA	TA REQUIREME ) ONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER		NATIONAL STOCK NUMBER	
2006101-105	•	1620-01-296-4328	
15. CORROSION PROT	ECTION PER MIL-C-16173 GRADE 3	, MIL-C-11796 CLASS 3 OR MM	5752.
16. SURFACE TEXTUR	RE PER ASME B46.1 IN LIEU OF ASA	. B46.1.	
17. IDENTIFICATION	AND MARKING PER MIL-STD-130 O	R TM1040.	
18. CLEANLINESS PER	R SAE AMS 2300 IN LIEU OF AMS 230	00.	
19. CHEMICAL MILL I	PER SAE AMS-C-81769 OR MM5527.		
20. PER DRAWING 200	06102, FLAG NOTE 2, USE MATERIA	L SAE AMS 5643 IN LIEU OF AI	MS 5643.
21. PER DRAWING 200 IN LIEU OF QQ-C-530.	06102, FLAT NOTE 3, USE MATERIA	L SAE AMS 4640 IN LIEU OF AN	MS 4640 OR <b>ASTM B196</b> ,
22. CHROME PLATE T	O DRAWING REQUIREMENTS AND	SAE AMS QQ-C-320 IN LIEU OI	F QQ-C-320.
4, IN LIEU OF MIL-I-68 ALLOWED. THE INTE REQUIRED SENSITIVIT PERFORMING THE INS DEVELOPED BY A LEV  24. OO-ALC/LGHLEN REVIEW BOARD (MRB AND MAJOR, FROM TI  25. PRIOR TO CONTRA FULL COMPLIANCE W THE MANUFACTURE OR RESPONSIBLE TO COM UNDERSTAND THE RE QUESTIONS CAN BE FOR	ESCENT PENETRANT INSPECTION IN 166, WITH THE FOLLOWING ACCEPT OF NO DEFECTS ALLOWED IS TO THE FOLLOWING ACCEPT OF NO DEFECTS ALLOWED IS TO THE SHALL BE NOT TO SHIPMING BETAINS AND THE ENGINEERING DRAWING PACKANCT AWARD, THE CONTRACTOR SHOUTH MANUALS, SPECIFICATIONS, AND THIS CONTRACTED LANDING GOVERNEED TO SHE MANUAL SQUIREMENTS NECESSARY TO MANORWARDED TO OO-ALC/LGHLEN.	TANCE/REJECTION CRITERIA THAT THE INSPECTION IS CON O INDICATIONS ALLOWED. TO LEVEL II WITH THE INSPECTION AS-410.  ALL RIGHTS TO REVIEW AND ENT OF DISCREPANT ITEM. A AGE SHALL BE SUBMITTED FOR HALL CERTIFY TO THE GOVER AND STANDARDS CALLED OU EAR COMPONENT/ASSEMBLY LS, SPECIFICATIONS, AND STAN OUTACTURE LANDING GEAR OF	E: NO DEFECTS DUCTED AT THE THE INSPECTOR HON PROCEDURE  ACCEPT MATERIAL LL DEVIATIONS, MINOR OR MRB DISPOSITION.  RNMENT IN WRITING T AND REQUIRED FOR CONTRACTOR IS ANDARDS AND FULLY COMPONENTS. ANY
	T AWARD, THE SUCCESSFUL BIDDE DUTING DOCUMENTS AND PROCES BEGINS.		
PREPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	24 Apr 03
OO-ALC FORM 462 OCT 96	477		<u> </u>

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PART NUMBER	1	NATIONAL STOCK NUMBER				
2006101-105	,	1620-01-296-4328	·			
27. INSTALL BUSHIN	GS PER THE FOLLOWING IN LIEU	OF MM5743:				
TO THE FINISH ON TH THE O.D. OF THE BUS PRESS OR HAMMER IS	NSTALLATIONS SHALL BE ACCOME I.D. OF THE HOUSING INTO WHI HING. FORCED INSTALLATION OF NOT PERMITTED, AND IS NOT ACT BUSHING INTO ALIGNMENT WITH	ICH THE BUSHING IS INSTALL F SUB-ZERO INSTALLATIONS, CCEPTABLE. A SMALL NON-M	ED, OR THE FINISH OF SUCH AS THE USE OF A ETALLIC HAMMER MAY			
	ING INSTALLATION, THE PARTS A TO REMOVE ALL CONTAMINATION		CLEANED WITH A			
SUB-ZERO COOLANT I	EEN SHALL BE USED FOR ALL SUB- IS SPECIFIED, AND APPROVED BY LIQUID NITROGEN SHALL BE SUF AS THE COOLANT.	OO-ALC/LGHLEN ENGINEERIN	NG. THE SOAK TIME OF			
COOLANT WITH AN A	HALL BE INSTALLED INTO THE HOBSOLUTE MINIMUM OF LOST TIMINIZE INSTALLATION TIME WHICH	E. TRIAL RUNS SHALL BE ACC	COMPLISHED AS			
INSTALLED, IN ADDIT HAVE PAINT OR SEAL BE HEATED BY THE UETC.; TO THE MAXIMUMONITOR HEAT AND SEAL AND	ONALLY BE NECESSARY TO HEAT TON TO SUB-ZERO COOLING OF TI ANT OR OTHER ORGANIC MATERI SE OF RADIANT HEAT TECHNIQUE UM TEMPERATURE OF 250 F. TEM SHALL BE LOCATED ON AREAS OF CALING, OXIDATION, OR CORROS	HE BUSHING. DETAIL PARTS I IAL APPLIED PRIOR TO HEATI ES, SUCH AS THERMAL BLANK MPERATURE MEASURING DEV F THE PART EXPECTED TO RE	IN PROCESS WILL NOT NG, THE PARTS SHALL KETS, INFRARED LAMPS ICES SHALL BE USED TO			
LIGHT COAT OF SEAL.	OUT FLANGES SHALL BE INSTALL ANT PER MIL-PRF-81733. INSTALL HAVE EXTRUDED AROUND THE PI	SHRUNKEN BUSHING AND W	IPE OFF ANY EXCESS			
G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.						
	WITH EXTERNAL GREASE GROOVE BUSHING INSTALLATION AND FA SHING IS FLANGED.					
PLATING) TO ALL BUS	IFORM COATING OF PRIMER PER N HING BORES AND ALLOW TO FUL DBSTRUCT GREASE PASSAGES).					
PREPARED BY		SYMBOL	DATE			
CAROL HYER		LGMPM	24 Apr 03			
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	(ATTACHMENT "A")
PART NUMBER	NATIONAL STOCK NUMBER
2006101-105	1620-01-296-4328
29. THE REQUIRED FORGING WILL ORIGINAL CERTIFIED FORGING PRO	BE PROCURED FROM THE QUALIFIED FORGING SOURCE USING THE OCEDURES AND DIES/TOOLING.
THE FORGING SOURCE, TO THE GO AVAILABLE AND THE FORGING SO	D, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM EVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE URCE HAS AN AGREEMENT WITH THE DETAIL PART BIDDER TO PROVIDE EVENT THEY ARE THE SUCCESSFUL BIDDER.
THE FORGING DRAWING AND SAE A FORGINGS. THE DETAILED PART C	GING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE
30. FORGING SOURCE, CONTROL A	AND LOCATION OF DIES:
A. FORGING DRAWING: 2006251	-1
B. CONTROL OF FORGING PROC	ESS: GOODRICH
C. LOCATION OF FORGING DIES	):
SIFCO IND., INC SIFCO FORGE GROUP 970 EAST 64TH STREET CLEVELAND, OH 44103-1620 PHONE: 216-432-6287 POC: MARILYN IRVINE DIE # 10692	
KROPP FORGE CO. 5301 W. ROOSEVELT RD. CICERO, IL 60804 PHONE: 708-652-6691 POC: CHUCK MEYER DIE # 7434	

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-296-4328

NOUN: Piston Assy, Inner- MLG Shock Strut

PART NUMBER (P/N)2006101-105 AIRCRAFT:F-16

## SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2006101-105 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-296-4328 NOUN: Piston Assy, Inner- MLG Shock Strut PART NUMBER (P/N)2006101-105 AIRCRAFT:F-16

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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	ONS I/STANDARDS WILL NOT BE FURNISHED IN IQNS ARE FURNISHED FOR THE MANUFACTURE		
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4. THE FOLLOWING SPECIFICATURNISHED UNLESS SO INDICA	TIONS/STANDARDS, ETC., WILL BE USED IN LIE ATED.	U OF THE DATA INDICATED. THE SUPERS	SEDED DATA WILL NOT BE
5. MARKING AND IDE	ENTIFICATION PER MIL-STD-130 IN	LIEU OF TM1040.	
PENCIL) IN 0.09" LETT INDICATE A LOCATIO ITEM SHALL BE ACCOOF THE CONTRACTOR MANUFACTURE, FOLLOWHO RECEIVES NUMENEXT NUMBER IN SECTHE SERIAL NUMBER APPEAR LIKE THIS: "STATE OF THE FOLLOWING PERCENTS ALLOWED IS THERE SHALL BE NOT CERTIFIED TO LEVEL NAS-410.  8. PER DRAWING 2007	QUIREMENTS, SERIAL NUMBER SHERS 0.004" - 0.007" DEEP IN THE LEN, OO-ALC/LILE SHALL PROVIDE SEROUS: THE SEROUS INTER AND A SEQUE ROUS INTERMITTENT CONTRACT QUENCE OF THE PRIOR CONTRACT SHOULD BEGIN USING 4 DIGIT SEROULD BEGIN USING 4 DIGIT SEROUS OF THE PRIOR CONTRACT WAVE DIRECT CURRENT (FWDC) OF ACCEPTANCE/REJECTION CRITES THAT THE INSPECTION IS CONDUCTED IN WITH THE INSPECTION PROCED THE INSPECTION PROCED CONTRACT OF THE INSPECTION PROCED CON	OCATION INDICATED. IF THE S/N LOCATION INSTRUCTIONS RIALIZATION SHALL BEGIN WALLOWED BY A DASH AND THE NTIALLY UNIQUE 3 DIGIT NUITS SHALL START SERIALIZATION. IF A CONTRACT PRODUCES RIAL NUMBERS. THE SERIAL OF ARTICLE INSPECTION PER WET CONTINUOUS METHOD DEFIA: NO DEFECTS ALLOWED BUTTED AT THE REQUIRED SENT OF PERFORMING THE INSPECTOR PERFORMENT	DRAWING DOES NOT S. SERIALIZATION OF TH THE CAGE (FSCM) 2 DIGIT YEAR OF MBER. A CONTRACTOR ON OF ITEM WITH THE MORE THAN 999 ITEMS, NUMBER SHOULD  ASTM E 1444 IN LIEU OF FLUORESCENT TYPE THE INTENT OF NO NSITIVITY LEVEL AND ISPECTION SHALL BE LIII AS SPECIFIED IN  L-S-8844 CL 3.
TREAT SHALL BE INSP	TREATED TO 180 KSI AND ABOVE, PECTED FOR ABUSIVE GRINDING/N D-866 IN LIEU OF MM 5759.		
12. PER DRAWING RE	QUIREMENTS, CADMIUM PLATE P	PER MM5542 (SUPPLIED) IN LIE	EU OF MM4951.
PREPARED BY		SYMBOL	DATE
JOAN HYATT		LGMPM	26 Mar 02
00-ALC FORM 462, 0	CT 96 (EF-V1)(PerFORM PRO)	REVIOUS EDITIONS ARE OBSOLETE	PAGE 1 OF 3

REV:	= -	ENGINEERING DATA REQUIREMENT	LONTINUATION SHEET
PART NUMBER	<u> </u>	NATIONAL STOCK N	IUMBER
2006134-1	,	1620-01-442-318	88
13. PER DRAWING	2006134, CHROMI	E PLATE PER SAE AMS-QQ-C-320 CL	2 IN LIEU OF QQ-C-320 CL 2.

- 14. PER DRAWING 2006134, SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165.
- 15. PER DRAWING 2006134, PAINT AS FOLLOWS:

APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582 TYPE 1, CL 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377 TYPE 1. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285 TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595 IN LIEU OF MIL-C-83286 WHICH HAS BEEN CANCELLED.

- 16. PER DRAWING 2007207, FORGE PER SAE AMS-F-7190 GRADE A IN LIEU OF MIL-F-7190 GRADE A.
- 17. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.
- A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.
- B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.
- 18. FORGING SOURCES, CONTROL AND LOCATION OF DIES:
  - A. FORGING DRAWING: 2007207-1
  - B. DIE # 4912 (W. PAT CROW, INC.); DIE # 933 (SHULTZ STEEL); DIE # 10822 (SIFCO FORGE GROUP)
  - C. CONTROL OF FORGING PROCESS: W. PAT CROW, INC.; SHULTZ STEEL; SIFCO FORGE GROUP
  - D. LOCATION OF FORGING DIES:

W. PAT CROW, INC. 200 LUXTON STREET

P.O. BOX 1720

FT. WORTH, TX 76101-1720

CAGE: 94790

(817) 536-2861 X280

PDCOADCO DV		
PREPARED BY	SYMBOL	DATE
JOAN HYATT	LGMPM	26 MAR 02

REV:	ENGINEERING D	ATA REQUIREMENTS CONTINUATION SHEET
		(ATTACHMENT "A")
PART NUMBER		NATIONAL STOCK NUMBER
2006134-1	,	1620-01-442-3188
SHULTZ STEEL		
5321 FIRESTONE BLVI		
SOUTHGATE, CA 9028 CAGE: 86985	80-3629	
(323) 357-3208		
SIFCO FORGE GROU	P	
970 EAST 64TH STREE		
CLEVELAND, OH 4410 CAGE: 78226	03-1620	
(216) 432-6284		
10 IE EODGING SOU	OCE IC NOT IDENTIFIED PRIOR TO	CONTRACT AWARD THE CONTRACTOR OF THE
		CONTRACT AWARD, THE CONTRACTOR SHALL  T TO PROCURE NEW FORGING DIES AND THE
		LL NOT PROCEED TO OBTAIN NEW FORGINGS DIES
		VERNMENT-PROCURING ACTIVITY. THE
		IES DEVELOPED UNDER THIS CONTRACT. THE
		WRITING, AT THE SAME TIME OF THE ORDER FOR ILIMITED USE RIGHTS OF THE DIES AND FORWARD A
	R TO THE GOVERNMENT CONTRAC	
20 A ETER CONTRACT	TAWARD THE CHOOFCELL DIDD	ED SHALL DROUDE A CODY OF THE DROCKSON'S
	· ·	ER SHALL PROVIDE A COPY OF THE PROCESSING SS SPECIFICATIONS) TO LILE FOR FINAL REVIEW
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		INOR AND MAJOR, FROM THE ENGINEERING
	WILL BE SUBMITTED FOR MRB DIS	
22. PRIOR TO CONTR	ACT AWARD, THE CONTRACTOR V	VILL CERTIFY TO THE GOVERNMENT IN WRITING
		AND STANDARDS CALLED OUT AND REQUIRED FOR
		GEAR COMPONENTS/ASSEMBLIES. THE CONTRACTOR
		UALS, SPECIFICATIONS, AND STANDARDS AND FULLY NUFACTURE THESE COMPONENTS. ANY QUESTIONS
	TO THIS OFFICE OO-ALC/LILE.	ANT QUESTIONS

# SOURCE QUALIFICATION REQUIREMENTS (PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-442-3188 NOUN: Cylinder, Outer, Shock Strut-MLG PART NUMBER (P/N)2006134-1 AIRCRAFT:F-16

#### SECTION C

## QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>2006134-1</u> and specification <u>MIL-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-442-3188 NOUN: Cylinder, Outer, Shock Strut-MLG PART NUMBER (P/N)2006134-1 AIRCRAFT:F-16

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$5,000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REVISION:	N: 05					ш	ENGINEERING	DATA LIST		* HISTORY *
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CAGE: MANUFACT 13002 GOODRICH	MANUFACTURER NAME: GOODRICH					20 EE	REFERENCE NR: 2006644-103		NOUN: CYL ASSY, INNER SHOCK STR, NLG	NSN: 1620010710534
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PHILADELPHIA	PHILADELPHIA PA. 19111-5098									
TELEPHONE: (2 FAX:	TELEPHONE: (215) 697-2179 FAX: (215) 697-1462									
TO VIEW OR OR	UDER: HITP://WWW.L	ODSSP.	DAPS.	MIL						
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2. NATIONAL STOCK NUMBER 2006644-103  4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED BY LIEU OF THE DATA MIDICATED. THE SUPERSEDED DATA WILL NOT BE PRINSHED UNLESS SO MIDICATED.  5. HEAT TREAT PER SAE AMS.H-6875 IN LIEU OF MIL.H-6875, WHICH HAS BEEN CANCELLED.  6. FOR PARTS HEAT-TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL.STD-867. GRINDING SHALL BE PER MIL.STD-866.  7. PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444. USE FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.  8. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MILS-13165, WHICH HAS BEEN CANCELLED.  9. INSTALL BUSINGS PER THE FOLLOWING IN LIEU OF MMS743:  A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE LD. OF THE HOUSING INTO WHICH THE BUSHING S. INSTALLED, OR THE FINISH OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING IN TO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING OF THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING OF THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING OF THE B	Α					
CYLINDER ASSY, INNER - SHOCK STRUT, NLG  2. FART NUMBER  2. TART NUMBER  3. NATIONAL STOCK NUMBER  1620-01-071-0534  4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSSEDE DATA WILL NOT BE FUNDAMENED UNLESS SO BERCATED.  5. HEAT TREAT PER SAE AMS-H-6875 IN LIEU OF MIL-H-6875, WHICH HAS BEEN CANCELLED.  6. FOR PARTS HEAT-TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866.  7. PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444. USE FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA. NO DEFECTS ALLOWED. THE INTERT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.  8. SHOT PEEN PER SAE AMS-S-1316S IN LIEU OF MIL-S-1316S, WHICH HAS BEEN CANCELLED.  9. INSTALL BUSINGS PER THE FOLLOWING IN LIEU OF MIL-S-1316S, WHICH HAS BEEN CANCELLED.  9. INSTALL BUSINGS PER THE FOLLOWING IN LIEU OF MIL-S-1316S, WHICH HAS BEEN CANCELLED.  9. INSTALL BUSINGS PER THE FOLLOWING IN LIEU OF MIL-S-1316S, WHICH HAS BEEN CANCELLED.  9. INSTALL BUSINGS PER THE FOLLOWING IN LIEU OF MIL-S-1316S, WHICH HAS BEEN CANCELLED.  9. INSTALL BUSINGS INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE LD. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE PRESS OR IN AMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER AND BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.  C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-LEGO ON-ALC/LILEC ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE USFICIENT TO ALLOW THE BUSHING	NOTE: MILITARY SPECIFICATION  1. THE FOLLOWING INSTRUCT	ONS I/STANDARDS WILL NOT BE FURNISHED IN THE	<i>HE BID SET.</i> F			
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PART NUMBER		NATIONAL STOCK NUMBER		
2006644-103	,	1620-01-071-0534		
E. IT MAY OCCASI INSTALLED, IN ADDIT HAVE PAINT OR SEAL BE HEATED BY THE U ETC.; TO THE MAXIM MONITOR HEAT AND TEMPERATURE. NO S  F. BUSHINGS WITH LIGHT COAT OF SEAL SEALANT THAT MAY  G. BUSHINGS WITH SEALANT SHALL ALSO A MANNER AS TO ENS INSTALLED. WIPE OF SEALANT FROM OTHE  H. FOR BUSHINGS MIL-C-16173 PRIOR TO PARAGRAPH G, IF BUSHINGS 10. APPLY A THIN UN PLATING) TO ALL BUSHINGS (PRIMER SHALL NOT COME.)	ONALLY BE NECESSARY TO HEAT TON TO SUB-ZERO COOLING OF THE ANT OR OTHER ORGANIC MATERIA SE OF RADIANT HEAT TECHNIQUE UM TEMPERATURE OF 250 F. TEM SHALL BE LOCATED ON AREAS OF CALING, OXIDATION, OR CORROST TO THE MIL-PRF-81733. INSTALL ANT PER MIL-PRF-81733. INSTALL HAVE EXTRUDED AROUND THE PER ANY EXCESS SEALANT AROUND FROM OF BUSHING ALSO.  WITH EXTERNAL GREASE GROOVING BUSHING INSTALLATION AND FACE OF LING OF PRIMER PER ASHING BORES AND ALLOW TO FULL DESTRUCT GREASE PASSAGES).  ENTS ARE AS FOLLOWS:	THE HOUSING INTO WHICH THE BUSHING. DETAIL PARTS IN AL APPLIED PRIOR TO HEATINGS, SUCH AS THERMAL BLANK IPERATURE MEASURING DEVINE THE PART EXPECTED TO READ INTO HOUSING BORE WHICH SHRUNKEN BUSHING AND WITE BUSHING AND WITE BUSHING FLANGE. SEALANT SHAIR ISIDE FACE OF BUSHING FLANGE THE INSIDE OF THE LUG WITE BUSHING FLANGE. THE INSIDE OF THE LUG WITE BUSHING FLANGE OF THE LUG WITE BUSHING FLANGE. THE INSIDE OF THE LUG WITE BUSHING FLANGE OF LUG WILL BE COATED WILL-PRF-23377 OR MIL-PRF-8558 LY CURE PRIOR TO INSTALLAT	N PROCESS WILL NOT IG, THE PARTS SHALL ETS, INFRARED LAMPS CES SHALL BE USED TO ACH MAXIMUM  CH HAS RECEIVED A PE OFF ANY EXCESS THE BUSHINGS.  RAGRAPH (F) EXCEPT LL BE APPLIED IN SUCH GE WHEN BUSHING IS NGE. WIPE ANY EXCESS  ILL BE COATED WITH WITH MIL-PRF-81733 PER  82 (AFTER CADMIUM TION OF BUSHING	
	YAMIDE PRIMER PER MIL-PRF-2337			
B. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595, IN LIEU OF MIL-C-83286, WHICH HAS BEEN CANCELLED.				
12. SPECIFICATION MM4951 CADMIUM PLATING WILL NOT BE FURNISHED AS IT IS LIMITED (PROPRIETARY) DATA. AS AN ALTERNATE USE SPEC MM5542, CADMIUM PLATING (PROVIDED) OR MIL-STD-870, TYPE 2, CLASS 1.				
13. CORROSION PROTECTION PER MIL-C-16173 GRADE 1 OR MIL-C-11796 CLASS 1 OR 2 IN LIEU OF MM5752.				
OR 4 WITH THE FOLLO NO DEFECTS ALLOWE AND THERE SHALL BI	ESCENT PENETRANT INSPECTION IN DWING ACCEPTANCE/REJECTION CED IS THAT THE INSPECTION IS COLON OF THE PROPERTY OF THE INSPECTION PROCESSED IN WITH THE INSPECTION PROCESSED IN WITH THE INSPECTION PROCESSED IN THE INSPECTION PROC	CRITERIA: NO DEFECTS ALLO NDUCTED AT THE REQUIRED S E INSPECTOR PERFORMING TH	WED. THE INTENT OF SENSITIVITY LEVEL IE INSPECTION SHALL	
PREPARED BY		SYMBOL	DATE	
CAROL HYER		LGMPM	8 Mar 03	

REV:	ENGINEERING DATA REQUIREMENT ONTINUATION SHEET  (ATTACHMENT A")
PART NUMBER	NATIONAL STOCK NUMBER
2006644-103	, 1620-01-071-0534

- 15. SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004" 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE WILL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-03-001".
- 16. IDENTIFICATION AND MARKING PER MIL-STD-130 IN LIEU OF TM1040.
- 17. CHEMICAL MILL PER SAE AMS-C-81769 IN LIEU OF MM5527.
- 18. THE FORGINGS SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.
- A. PRIOR TO CONTRACT AWARD, THE DETAIL PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PART BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.
- B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.
- 19. FORGING SOURCE, CONTROL AND LOCATION OF DIES:

A. FORGING DRAWING:

2006744-1

DIE NUMBER:

10124

- B. CONTROL OF FORGING PROCESS: B.F. GOODRICH
- C. LOCATION OF FORGING DIES:

SIFCO IND., INC SIFCO FORGE GROUP 970 E. 64TH STR. CLEVELAND, OH 44103-1620 PHONE: 216-881-8600 X287 POC: MARILYN IRVINE

PREPARED BY

CAROL HYER

SYMBOL

LGMPM

8 Mar 03

PAGE 3 OF 4

REV:	ENGINEERING DA	TA REQUIREMENT ONTINUATION :	SHEET
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PART NUMBER		NATIONAL STOCK NUMBER	
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FULL COMPLIANCE W THE MANUFACTURE OR RESPONSIBLE TO COM UNDERSTAND THE RI	ACT AWARD, THE CONTRACTOR SIVITH MANUALS, SPECIFICATIONS, A OF THIS CONTRACTED LANDING GOTHER MANUAL SEQUIREMENTS NECESSARY TO MAIN FORWARDED TO OO-ALC/LILE.	AND STANDARDS CALLED OU EAR COMPONENT/ASSEMBLY LS, SPECIFICATIONS, AND STA	T AND REQUIRED FOR CONTRACTOR IS NDARDS AND FULLY
	T AWARD THE SUCCESSFUL BIDDE OUTING DOCUMENTS AND PROCES N BEGINS.		The state of the s
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PREPARED BY  CAROL HYER		SYMBOL LGMPM	8 Mar 03
CAROLITER		DOMINI	PAGE 4 OF 4

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>«·1620-01-071-0534»</u>
NOUN: « CYL ASSY, INNER SHOCK STRUT, NLG »

PART NUMBER (P/N)« 2006644-103» AIRCRAFT:« F-16»

#### SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>\*2006644-103\*</u> and specification <u>SAE AMS-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the precontract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>\* 1620-01-071-0534</u>\*
NOUN: \* CYL ASSY, INNER SHOCK STRUT, NLG \*

PART NUMBER (P/N)<u>\* 2006644-103</u>\* AIRCRAFT: «F-16\*

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$ \*5000.00 \*.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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O - OTHERS, CONTRACTOR MUST ACQUIRE.

X - DATA SUPPLIED (NOT IN EDCARS). G - GOV'T DOCUMENT.

R - FURNISHED BY PCD UPON REQUEST. O - OTHERS, CONTRAC
P - PARTIAL DOCUMENT FURNISHED.

WUST ACQUIRE.

C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED:

FURNISHED METHOD CODE LEGEND:

ENGINEERING DATA LIST REMARKS

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NOTE: MILITARY SPECIFICATION	ONS I/STANDARDS WILL NOT BE FURNISHED IN	THE BID SET.	
	IONS ARE FURNISHED FOR THE MANUFACTURE	OF	
CYLINDER, STRUT, M	LG		
2. PART NUMBER		3. NATIONAL STOCK NUMBER	
14-40602-7		1620-01-134-9231	
4. THE FOLLOWING SPECIFICA FURNISHED UNLESS SO INDICA	TIONS/STANDARDS, ETC., WILL BE USED IN LIE TED.	U OF THE DATA INDICATED. THE SUPERS	EDED DATA WILL NOT BE
I, METHOD B OR C, LE CRITERIA: NO DEFEC CONDUCTED AT THE INSPECTOR PERFORM	QUIREMENTS, PERFORM FLUORES EVEL 3 OR 4 IN LIEU OF MIL-I-6866 TS ALLOWED. THE INTENT OF I REQUIRED SENSITIVITY LEVEL A ING THE INSPECTION SHALL BE O PED BY A LEVEL III AS SPECIFIED	S WITH THE FOLLOWING ACCI NO DEFECTS ALLOWED IS TH ND THERE SHALL BE NO INDI CERTIFIED TO LEVEL II WITH '	EPTANCE/REJECTION AT THE INSPECTION IS CATIONS ALLOWED THE
MIL-I-6868. USE FULL WITH THE FOLLOWING DEFECTS ALLOWED I THERE SHALL BE NO I	UIREMENTS, PERFORM MAGNET, WAVE DIRECT CURRENT (FWDC) G ACCEPTANCE/REJECTION CRIT IS THAT THE INSPECTION IS CONICATIONS ALLOWED. THE INSIDICATION PROCEING WITH THE INSPECTION PROCEING.	), WET CONTINUOUS METHOD ERIA: <u>NO DEFECTS ALLOWE</u> DUCTED AT THE REQUIRED SE SPECTOR PERFORMING THE IN	, FLUORESCENT TYPE  D. THE INTENT OF NO ENSITIVITY LEVEL AND USPECTION SHALL BE
7. PER DRAWING REQ	UIREMENTS, MARK AND IDENTIF	FY PER MIL-STD-130 IN LIEU O	F IM-8 AND IM-24.
8. PER DRAWING REQ	UIREMENTS, HEAT TREAT ALUM	INUM ALLOYS PER SAE AMS-I	I-6088 IN LIEU OF HT9.2.
9. PER DRAWING REQ	UIREMENTS, HEAT TREAT PER SA	AE AMS-H-6875 IN LIEU OF HT-	17, HT-21 AND HT-22.
10. PER DRAWING REG	QUIREMENTS, FINISH PER MIL-C-	16173 GR 1 OR 2 IN LIEU OF NF	S 76.
11. PER DRAWING 6-40	0638, MATERIAL PER ASTM B196, 1	B197, B194 IN LIEU OF NAI-125:	5 AND QQ-C-530.
12. PER DRAWING 6-40	%37 ECO 82C293, MATERIAL PER S	SAE AMS 4881 IN LIEU OF NAI-	1255.
13. PER DRAWINGS 14 MIL-S-6758 COND. D1.	-40636, 14-40622 AND 14-40642, MA	TERIAL PER SAE AMS-S-6758 C	OND. D1 IN LIEU OF
14. PER DRAWING 14-4	10632, MATERIAL PER SAE AMS-QO	Q-S-763 IN LIEU OF QQ-S-763.	
15. PER DRAWING REC UNDER 180,000 PSI. OV	QUIREMENTS, CADMIUM PLATE P VER 180,000 PSI USE MIL-STD-870 T	PER SAE AMS-QQ-P-416 TYPE II TYPE II CL 2 IN LIEU OF STF017	, CL 3 FOR HEAT TREAT 73, STF0175 AND FP-2.
16. USE SAE AMS-A-22	771 IN LIEU OF MP-314 AND NAI 1:	306.	
SAE AMS-C-5541 IN LIE	NG THE FOLLOWING IN LIEU OF S U OF FP-28, PRIMER PER MIL-PRF YPE IV IN LIEU OF F-5.3.	TF0273: -23377 IN LIEU OF FP-80 AND C	CHROME ACID BRUSH
REPARED BY			
OAN HYATT	:	SYMBOL	DATE
UANTIAII		LGMPM	11 Oct 01

REV:	ENGINEERING DA	ATA REQUIREME. CONTINUATION  (ATTACHMENT "A")	SHEET
		(ATTACHMENT A)	
PART NUMBER		NATIONAL STOCK NUMBER	
14-40602-7	,	1620-01-134-9231	
SULFURIC ACID ANO	STEM IN SEQUENCE IN LIEU OF ST DIZE PER SAE AMS-A-8625 TYPE II FATIVE COMPOUND PER MIL-C-161	CL 1.	
OF EPOXY POLYAMID	EPOXY WATERBORNE PRIMER PE DE PRIMER PER MIL-PRF-23377 TYP , COLOR NUMBER 17925 (WHITE) P	E 1. APPLY TWO TOPCOATS P	OLYURETHANE PER
20. THREADS PER MI	L-S-007742 IN LIEU OF FH-32.		•
21. PASSIVATE PER S	AE AMS-QQ-P-35 IN LIEU OF STF016	58.	
22. PRESERVATION, I	PACKING, HANDLING AND STORAG	GE PER MIL-C-81309 IN LIEU O	F P6968.
- 0.007" DEEP IN THE I OO-ALC/LILE SHALL I ACCOMPLISHED AS F CONTRACTOR NAMEI MANUFACTURE, FOL WHO RECEIVES NUMI NEXT NUMBER IN SEC	SHALL BE VIBROPEENED (WITH VILOCATION INDICATED. IF THE DR PROVIDE S/N LOCATION INSTRUCT OLLOWS: THE SERIALIZATION SHOON THE CONTRACT, FOLLOWED LOWED BY A DASH AND A SEQUENT OF THE PRIOR CONTRACT SHOULD BEGIN USING 4 DIGIT SEIS/N 98747-01-001".	AWING DOES NOT INDICATE A TIONS. SERIALIZATION OF ITE ALL BEGIN WITH THE CAGE (I BY A DASH AND THE 2 DIGIT NTIALLY UNIQUE 3 DIGIT NUM S SHALL START SERIALIZATION. IF A CONTRACT PRODUCES	A LOCATION, EM SHALL BE FSCM) OF THE YEAR OF MBER. A CONTRACTOR ON OF ITEM WITH THE MORE THAN 999 ITEMS,
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PREPARED BY		SYMBOL	DATE
JOAN HYATT		LGMPM	11 Oct 01

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	TH EXTERNAL GREASE GROOVES, BUSHING INSTALLATION AND FA SHING IS FLANGED.		
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PREPARED BY		SYMBOL	DATE
JOAN HYATT		LGMPM	11 Oct 01
00-ALC FORM 462, OCT 9	3 (FF-V1) (PerFORM PRO)		PAGE 3 OF 5

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PART NUMBER		NATIONAL STOCK NUMBER	
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28. FORGING SOURCE	, CONTROL AND LOCATION OF DI	ES:	
A. FORGING DRAW	ING: 14-40602-1-3-5F		
B. DIE #: 6796			
C. CONTROL OF FO	PRGING PROCESS: NORTHROP		
D. LOCATION OF F	ORGING DIES:		
KAISER ALUMINUM 1001 MCWANE BLVD. P.O. BOX 2398			
OXNARD, CA 93034			
(805) 488-4401			
CAGE: 28317			
THE GOVERNMENT IN FORGING SOURCE. THE EXPRESS WRITTEN COUNLIMITED USE OF THE FORGING HOUSE IN WARREST IN WARREST TO THE SOURCE T	CE IS NOT IDENTIFIED PRIOR TO COME WRITING OF THE INTENT TO PROPERTY OF THE CONTRACTOR SHALL NOT PROPERTY OF THE GOVERNMENT-PROPERTY OF THE GOVERNMENT-PROPERTY OF THE SAME TIME OF THE SAME TIME OF THE DIEST OF THE	CURE NEW FORGING DIES AN CEED TO OBTAIN NEW FORGING OCURING ACTIVITY. THE GOVE CONTRACT. THE CONTRACTORY OF THE DIES IS PL	D THE PROPOSED NGS DIES WITHOUT THE VERNMENT SHALL HAVE OR SHALL INFORM THE ACED, THAT THE
PREPARED BY		CVMDOI	DATE
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JOAN IIIAI I		LGMPM	11 Oct 01

REV:	ENGINEERING DA		NUATION	SHEET
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	T AWARD, THE SUCCESSFUL BIDDE OUTING DOCUMENTS AND PROCES I BEGINS.			
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PREPARED BY JOAN HYATT		SYMBOL LGMPM		DATE 11 Oct 01

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-134-9231

NOUN: Cylinder, Strut, MLG

PART NUMBER (P/N)14-40602-7 AIRCRAFT:F-5

### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>14-40602-7</u> and specification <u>MIL-A-22771</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.
  - (a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-134-9231

NOUN: Cylinder, Strut, MLG

PART NUMBER (P/N)14-40602-7 AIRCRAFT:F-5

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$1500.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION:	1: 03					Γ	ENGINEERING	DATA	LIST		* HISTORY *
DATE:		DATA TECH: SJH	×	ORG	ORGN SYMBOL:	MBOL	11	ГСМРМ	PR NR:		APPLICATION: F-5	PAGE 1 OF 1
CAGE: 76823		MANUFACTURER NAME: NORTHROP GRUMMAN CORP EL SEGUNDO CA	SEG	OGNA	ర		图 =	REFERENCE NR: 14-41607-3		NOUN: CYLIND	NOUN : CYLINDER, LANDING GE	NSN: 1620001275785
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REV:	ENGINEE	ERING DATA REQUIREMENTS (ATTACHMENT "A")	
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2. PART NUMBER		3. NATIONAL STOCK NUMBER	
14-41607-3		1620-00-127-5785	
4. THE FOLLOWING SPECIFICAT	TIONS/STANDARDS, ETC., WILL BE USED IN LIEU ATED.	) OF THE DATA INDICATED. THE SUPERS	EDED DATA WILL NOT BE
5. MARKING AND IDE	ENTIFICATION PER MIL-STD-130 IN	LIEU OF IM-24.	
PENCIL) IN 0.09" LETT INDICATE A LOCATIO ITEM SHALL BE ACCOOF THE CONTRACTOR MANUFACTURE, FOLLOWHO RECEIVES NUMBERT NUMBER IN SEC	QUIREMENTS, SERIAL NUMBER SHATERS 0.004" - 0.007" DEEP IN THE LOWN, OO-ALC/LILE SHALL PROVIDE SOMPLISHED AS FOLLOWS: THE SER NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND A SEQUENTABLE OF THE PRIOR CONTRACT SHOULD BEGIN USING 4 DIGIT SERIAL	DCATION INDICATED. IF THE S/N LOCATION INSTRUCTIONS LIALIZATION SHALL BEGIN WILL LOWED BY A DASH AND THE STIALLY UNIQUE 3 DIGIT NUMBER SHALL START SERIALIZATION. IF A CONTRACT PRODUCES	DRAWING DOES NOT  SERIALIZATION OF  TH THE CAGE (FSCM)  DIGIT YEAR OF  SER. A CONTRACTOR  ON OF ITEM WITH THE  MORE THAN 999 ITEMS,
IT-61. USE FULL WAY THE FOLLOWING ACC ALLOWED IS THAT THE SHALL BE NO INDICA	QUIREMENTS, PERFORM MAGNETIC VE DIRECT CURRENT (FWDC), WET CEPTANCE/REJECTION CRITERIA: I HE INSPECTION IS CONDUCTED AT TIONS ALLOWED. THE INSPECTOR E INSPECTION PROCEDURE DEVEL	CONTINUOUS METHOD, FLUC NO DEFECTS ALLOWED. THE THE REQUIRED SENSITIVITY R PERFORMING THE INSPECTION	DRESCENT TYPE WITH INTENT OF <u>NO DEFECTS</u> LEVEL AND THERE ON SHALL BE CERTIFIED
8. MATERIAL PER SAI	E AMS 6425 IN LIEU OF NAI-1274 AN	ID NAI-1275.	·
9. DIMENSIONS AND	TOLERANCES PER ASME Y14.5 IN I	LIEU OF 3-40500 AND 20Y201.	
10. THREADS PER MI	L-S-8879 IN LIEU OF FH-32.		
11. HEAT TREAT PER	SAE AMS-H-6875 IN LIEU OF HT-22		
	-TREATED TO 180 KSI AND ABOVE, PECTED FOR ABUSIVE GRINDING/N CD-866.		
PREPARED BY		SYMBOL	DATE
JOAN HYATT		LGMPM	26 Jun 02

REV:	ENCINEEDING DA	TA REQUIREMEN CONTINUATION	CHEET
nev:	ENGINEERING DA	(ATTACHMENT "A")	
PART NUMBER		NATIONAL STOCK NUMBER	
14-41607-3	,	1620-00-127-5785	
13. SHOT PEEN PER S	AE AMS -S-13165 IN LIEU OF MA-57		
14. PER NOTE 8 ON D	RAWING, USE MIL-STD-1501 TYPE	II CL 2 IN LIEU OF STF0352.	
15. PER NOTE 9 ON D	RAWING, USE MIL-STD-870 TYPE II	CL 1 IN LIEU OF STF0180.	
16. TEMPORARY PRO	TECTION PER MIL-C-16173 GR 3 OR	4 IN LIEU OF FP-68 GR 3.	
17. MACHINE PARTS	USING BEST SHOP PRACTICE IN LII	EU OF MA-116.	
	T AWARD, THE SUCCESSFUL BIDD! OUTING DOCUMENTS AND PROCES N BEGINS.		
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PREPARED BY JOAN HYATT		SYMBOL LGMPM	26 Jun 02
00-ALC FORM 462, OCT 9	6 (EF-V1) (PerFORM PRO)		PAGE 2 OF 2

(PL98-525, SECTION 2319)

STOCK NR (NSN) <u>1620-00-127-5785</u> NOUN: <u>CYLINDER, NLG</u> PART NUMBER (P/N) 14-41607-3 AIRCRAFT: F-5

### SECTION C

### QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 14-41607 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

### SOURCE QUALIFICATION REQUIREMENTS (PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-127-5785 NOUN: CYLINDER, NLG PART NUMBER (P/N) 14-41607-3 AIRCRAFT:F-5

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2000.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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2. PART NUMBER		3. NATIONAL STOCK NUMBER	
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5. OO-ALC/LGHLEN items. All deviations, n	N System Engineering retains all right to re ninor and major, from the Engineering Dra	eview and accept/reject MRB's price awing Package will be submitted for	or to shipment of discrepant r MRB disposition.
specifications, and stand Contractor is responsible	rard, the contractor will certify to the gover lards called out and required for the manufi e to completely search these manuals, spec are landing gear components. Any question	acture of this contracted landing ge ifications, and standards and fully	ar component/assembly. understand the requirements
7. Surface Roughness	per ASME B46.1.		
8. Identification and M	Marking per MIL-STD-130, impression star	mping not permitted, in lieu of PS	IM-23.
9. Threads per MIL-S-	-7742, Safety Critical, in lieu of PS FH-32		
10. Machine using Best	t Aircraft Industry Shop Practices in lieu of	f PS MA-116.	
Wet Continuous Method intent of NO DEFECTS indications allowed. T	Particle Inspection per ASTM E 1444, in I d, fluorescent type with the following accept ALLOWED is that the inspection is conditionally the Inspection will as specified in NAS-410.	ptance/rejection criteria: NO DEF ucted at the required sensitivity lev	ECTS ALLOWED. The el and there shall be no
	AMS 13165 all external surfaces except the four before plating in lieu of PS MA-57.		per note #8 after machining,
13. Heat Treat per MII	L-H-6875 in lieu of HT-15.		
14. On Parts Heat Trea grinding/machine Burn	ated 180 KSI and above, any surfaces Ground Per MIL-STD-867. Grinding shall be per	und/Machined after Heat Treat will er MIL-STD-866.	be inspected for abusive
15. Cadmium Plate per	MIL-STD-870, Class 1, Type II in lieu of	f STF 0180.	
	oxy Waterborne Primer per MIL-P-85582, e per MIL-P-23377, Type I.	Class 2, Type I in lieu of STF 022	1. Alternate primer, one
17. Apply two top coat STF 0195.	ts Polyurethane per MIL-PRF-85285, Type	e I, color #17925 (White) per FED	STD-595 in lieu of
18. Chromium Plate pe	er MIL-STD-1501, Type II Class 2, in lieu	of STF 0352.	
19. Apply Corrosion P	reventative Compound per MIL-C-16173,	Grade 2, in lieu of STF 0144.	
PREPARED BY		SYMBOL	DATE

SANDI L. FIELD

LGMPM

20030418

REV:	ENGINEERING DATA REQUIREMEN. CONTINUATION SHEET  (ATTACHMENT "A")	
PART NUMBER 14-40605-9	NATIONAL STOCK NUMBER 1620-00-007-1781	<u> </u>

- 20. Protect with FED-STD-242 prior to packaging for shipment in lieu of FED-STD-163.
- 21. Use SAE AMS 6257 or SAE AMS 6419 for 300 M Steel.
- 22. Serial Number shall be Vibropeened, or Steel Stamped, in 0.09" LETTERS 0.004" 0.007" Deep in the location indicated. If the Drawing does not indicate a Location, OO-ALC/LGHLEN shall provide S/N Location Instructions. Serialization of item shall be accomplished as follows:

The Serialization shall begin with the CAGE (FSCM)of the Contractor named on the Contract, followed by a Dash and the 2 Digit year of Manufacture, followed by a dash and a sequentially unique 3 digit number. A Contractor who receives numerous intermittent contracts shall start Serialization of item with the next number in Sequence of the prior Contract. If a Contract produces more then 999 items, the Serial Number should begin using 4 Digit Serial Numbers. The Serial Number should appear like this: "S/N 98747-03-001".

### 23. FORGING REQUIREMENTS;

- A. The required forging will be procured from the qualified forging source using the original forging procedures and dies/tooling.
  - 1. Prior to contract award the detailed part bidder will provide certification, from the forging source, to the government that the certified dies and forging procedures are available and the forging source has an agreement with the detail part bidder to provide forgings for their use in the event they are the successful bidder.
  - 2. Prior to production, forging lot qualification will be accomplished as specified on the forging drawing and MIL-F-7190 (Steel) in lieu of NAI-1271. The contractor will assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment to the government.
- B. FORGING SOURCE, CONTROL AND LOCATION OF DIES:

1. Forging drawing

14-40605-9

Die Number:

7802

2. Control of Forging Processes:

Northrop

3. Location of Forging Dies:

Kropp Forge

5301 W. Roosevelt Rd

Cicero, Ill 60804

DF	DATE
LGMPM	20030418

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-007-1781 NOUN: Piston, Strut MLG

PART NUMBER (P/N)14-40605-9 AIRCRAFT:F-5

### SECTION C

### QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>14-40605-9</u> and specification <u>MIL-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-007-1781</u> NOUN: <u>Piston</u>, <u>Strut MLG</u>

PART NUMBER (P/N)14-40605-9 AIRCRAFT:F-5

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2,000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION: 11	II						ENGIN	GINEERING DATA LIST	DATA	LIST		* HICTODA *
DATE:		DATA TECH:	SSF		ORGN	ORGN SYMBOL:	13	27	ГСМРМ	PR NR :		APPLICATION: T-38	PAGE 1 OF 1
CAGE: 98747	-	MANUFACTURER NAME: OGDEN AIR LOGISTICS CENTER OGDEN	TER O	GDEN	-		<u> </u>	REFERENCE 1 7227218-10	NCE NR: -10		NOUN: CYLINDE	NOUN : CYLINDER AND PISTON	NSN :
CAGE	DRAWING NUMBER	NUMBER		REV SI	NR HEETS	REV SHEETS CARDS CODE CODE	TORNE	DIST	NOON			REQUIREMENTS	
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STANDARDS WILL NOT BE FURNISHED.

TO OBTAIN THESE SPECS AND STDS WRITE TO:

DODSSP

BUILDING 4/SECTION D 700 ROBINS AVE. PHILADELPHIA PA. 19111-5098 TELEPHONE: (215) 697-2179 FAX: (215) 697-1462 TO V)

TO VIEW OR ORDER: HTTP://WWW.DODSSP.DAPS.MIL

ENGINEERING DATA LIST REMARKS

FURNISHED METHOD CODE LEGEND:

C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION, M - STEETE BACE DANNING THEFE

R - FURNISHED BY PCD UPON REQUEST.
P - PARTIAL DOCUMENT FURNISHED.

X - DATA SUPPLIED (NOT IN EDCARS).

O - OTHERS, CONTRACTOR MUST ACQUIRE. G - GOV'T DOCUMENT.

2007		
REV:	- 1	ENGINEERING DATA LOUIREMENTS (ATTACHMENT "A")
	ONS I/STANDARDS WILL NOT BE F	
1. THE FOLLOWING INSTRUCT	CYLINDER	
2. PART NUMBER	<u> </u>	3. NATIONAL STOCK NUMBER
7227218-10		1620-00-264-0745 LE
4. THE FOLLOWING SPECIFICA FURNISHED UNLESS SO INDICA		E USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE
5. Identify Per MIL-STI	D-130 in lieu of IM-8 and M.	A-19.1.
6. Threading Per SAE A	S-8879 in lieu of FH-32.	
7. Install Bushings per t	ne following in lieu of CP-4	and FH-19.
Housing into which the B the use of a Press or Ham	ushing is installed, or the Fir	I in such a manner as to avoid damage to the finish on the I.D. of the hish of the Bushing. Forced installation of Sub-Zero installations, such as NOT acceptable. A small Non-Metallic Hammer may be used to tap the leat the Bushing.
B. Prior to Bushing lacontamination.	nstallation, the Parts and Ho	ousing Bore shall be cleaned with a cleaning solvent to remove all
approved by OO-ALC/LO		installations unless some other Sub-Zero Coolant is specified, and oak time of the Bushing in the Liquid Nitrogen shall be sufficient to allow ant.
		g immediately upon removal from the Coolant with an absolute minimum of ry to minimize installation time which should be in the order of about seven
Cooling of the Bushing. I heating, the parts shall be the maximum temperature	Detail parts in process, which Heated by the use of Radiant of 250 F. The temperature	busing into which the Bushing is to be installed, in addition to Sub-Zero in do not have Paint or Sealant or other Organic Material applied prior to it Heat Techniques, such as Thermal Blankets, Infrared Lamps, ETC.: to measuring devices shall be used to monitor heat and shall be located on ure. No Scaling, Oxidation, or Corrosion shall be permitted.
		Housing Bore which has received a Light Coat of Sealant per off any Excess Sealant that may have Extruded around the Periphery of
or Lug under Flange. Sea	lant shall be applied in such a Wipe off any excess Sealan	milar manner as paragraph (F) except sealant shall also be applied to Face a manner as to ensure complete coverage of inside face of Bushing Flange at around Periphery of Bushing Flange forming a Bead. Wipe any excess
		ne inside of the Lug will be coated with MIL-C-16173 prior Bushing PRF-81733 per paragraph G, If Bushing is Flanged.

**RATT NUMBER** 7227218-10 . **NATIONAL STOCK NUMBER** 1620-00-264-0745 LE**  8. Shot Peen per SAE AMS-S-13165 in Lieu of MP-207.  9. Ultrasonic Inspection per SAE AMS-A-8625 Type II, Class 1 in lieu of IT-32.5.  10. Sulfuric Anodize per SAE AMS-A-8625 Type II, Class 1 in lieu of FP-59 and NFS-76.  11. For Drawing 6-41602:  A. In lieu of Finish SPEC NFS-76, Finish per the following:  1. Apply ONE coat epoxy Waterborne primer per MIL-PRF-85582, Type 1, Class 2. Alternate Primer, ONE coat EPOXY-PLOYAMIDE per MIL-PRF-23377, Type 1.  2. Apply TWO TOPCOATS of POLYURETHANE per MIL-PRF-85285, Type I COLOR # 17925 (WHITE) per FED-STD-595.  B. In lieu of TT-L-32 and FP-81, use A-A-3165, COLOR # 17038 (BLACK) per FED-STD-595.  12. Perform Magnetic Particle Inspection per ASTM E 1444, in lieu of IT-32.3. Use Type Full Wave Direct Current (FWDC), Wet Continuous Method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED the that the inspection is conducted at the required describing level and there shall be no indications allowed. The Inspection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The Inspection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection s	REV:	ENGINEERING DATA REQUIREMEN. ONTINUATION SHEET
8. Shot Peen per SAE AMS-S-13165 in Lieu of MP-207.  9. Ultrasonic Inspection per SAE AMS-STD-2154 Type I class A, in lieu of IT-32.5.  10. Sulfuric Anodize per SAE AMS-A-8625 Type II, Class I in lieu of FP-59 and NFS-76.  11. For Drawing 6-41602:  A. In lieu of Finish SPEC NFS-76, Finish per the following:  1. Apply ONE coat epoxy Waterborne primer per MIL-PRF-85582, Type I, Class 2. Alternate Primer, ONE coat EPOXY-PLOYAMIDE per MIL-PRF-23377, Type I.  2. Apply TWO TOPCOATS of POLYURETHANE per MIL-PRF-85285, Type I COLOR # 17925 (WHITE) per FED-STD-595.  B. In lieu of TT-L-32 and FP-81, use A-A-3165, COLOR # 17038 (BLACK) per FED-STD-595.  12. Perform Magnetic Particle Inspection per ASTM E 1444, in lieu of IT-32.3. Use Type Full Wave Direct Current (FWDC), Wet Continuous Method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The Inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of IT-32.1 with the following Acceptance/Rejection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of IT-32.1 with the following Acceptance Rejection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of IT-32.1 with the following Acceptance Rejection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of IT-32.1 with the following Acceptance Rejection Criteria: NO DEFECTS ALLOWED.  13. Perform Fluorescent Penetrant inspection procedure dev		(ATTACHMENT "A")
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12. Perform Magnetic Particle Inspection per ASTM E 1444, in lieu of IT-32.3. Use Type Full Wave Direct Current (FWDC), Wet Continuous Method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The Inspector performing the Inspection will be certified to the Level II with the Inspection Procedure developed by a Level III as specified in NAS-410.  13. Perform Fluorescent penetrant inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of IT-32.1 with the following Acceptance/Rejection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410.  14. Application of Sealing, Locking, and Retaining Compounds Use MIL-R-46082, Type II in lieu of MA-103.  15. Heat Treat per SAE AMS-H-6875 in lieu of HT-3.  16. Heat Treat per SAE AMS-H-6088, T73 Cond in lieu of HT-1.  17. Heat Treat per SAE AMS-H-6088, T73 Cond in lieu of HT-1.	* * *	of POLYURETHANE per MIL-PRF-85285, Type I COLOR # 17925 (WHITE) per
Wet Continuous Method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The Inspector performing the Inspection will be certified to the Level II with the Inspection Procedure developed by a Level III as specified in NAS-410.  13. Perform Fluorescent penetrant inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of IT-32.1 with the following Acceptance/Rejection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410.  14. Application of Sealing, Locking, and Retaining Compounds Use MIL-R-46082, Type II in lieu of MA-103.  15. Heat Treat per SAE AMS-H-6875 in lieu of HT-3.  16. Heat Treat per SAE AMS-H-688, T73 Cond in lieu of HT-1.  17. Heat Treat per SAE AMS-H-6088, T73 Cond in lieu of HT-1.  18. Cadmium Plate per SAE AMS-QQ-P-416. Type II, Class 2 in lieu of FP-2.	B. In lieu of TT-L-32 and FP-81,	use A-A-3165, COLOR # 17038 (BLACK) per FED-STD-595.
the following Acceptance/Rejection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410.  14. Application of Sealing, Locking, and Retaining Compounds Use MIL-R-46082, Type II in lieu of MA-103.  15. Heat Treat per SAE AMS-H-6875 in lieu of HT-3.  16. Heat Treat for Beryllium Copper per SAE AMS-H-7199 in Lieu of HT-9.2.  17. Heat Treat per SAE AMS-H-6088, T73 Cond in lieu of HT-1.  18. Cadmium Plate per SAE AMS-QQ-P-416. Type II, Class 2 in lieu of FP-2.	Wet Continuous Method, fluorescent trintent of NO DEFECTS ALLOWED is indications allowed. The Inspector pe	ype with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The sthat the inspection is conducted at the required sensitivity level and there shall be no erforming the Inspection will be certified to the Level II with the Inspection Procedure
<ul> <li>15. Heat Treat per SAE AMS-H-6875 in lieu of HT-3.</li> <li>16. Heat Treat for Beryllium Copper per SAE AMS-H-7199 in Lieu of HT-9.2.</li> <li>17. Heat Treat per SAE AMS-H-6088, T73 Cond in lieu of HT-1.</li> <li>18. Cadmium Plate per SAE AMS-QQ-P-416. Type II, Class 2 in lieu of FP-2.</li> </ul>	the following Acceptance/Rejection Cr inspection is conducted at the required	riteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the I Sensitivity Level and there shall be no indications allowed. The inspector performing the
<ul> <li>16. Heat Treat for Beryllium Copper per SAE AMS-H-7199 in Lieu of HT-9.2.</li> <li>17. Heat Treat per SAE AMS-H-6088, T73 Cond in lieu of HT-1.</li> <li>18. Cadmium Plate per SAE AMS-QQ-P-416. Type II, Class 2 in lieu of FP-2.</li> </ul>	14. Application of Sealing, Locking,	and Retaining Compounds Use MIL-R-46082, Type II in lieu of MA-103.
<ul> <li>17. Heat Treat per SAE AMS-H-6088, T73 Cond in lieu of HT-1.</li> <li>18. Cadmium Plate per SAE AMS-QQ-P-416. Type II, Class 2 in lieu of FP-2.</li> </ul>	15. Heat Treat per SAE AMS-H-6875	in lieu of HT-3.
18. Cadmium Plate per SAE AMS-QQ-P-416. Type II, Class 2 in lieu of FP-2.	16. Heat Treat for Beryllium Copper p	per SAE AMS-H-7199 in Lieu of HT-9.2.
	17. Heat Treat per SAE AMS-H-6088	, T73 Cond in lieu of HT-1.
19. Drawing 3-40516, P110-1 is not required.	18. Cadmium Plate per SAE AMS-QQ	2-P-416. Type II, Class 2 in lieu of FP-2.
	19. Drawing 3-40516, P110-1 is not r	equired.

REV:	ENGINEERING DA	ATA REQUIREMEN DONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER		NATIONAL STOCK NUMBER	
722721	<b>8</b> -10	1620-00-264-0745	LE
20. MATERIAL:			
A. Material Call Out	t on DWG 3-40521 use ASTM B150 in	lieu of QQ-C-390.	
B. Material Call Out	on DWG 6-41685 use ASTM B150 in 1	ieu of QQ-B-671.	
C. Material Call Out	on DWG 3-40516 use SAE AMS 6382	in lieu of MIL-S-5626.	
21. Finishes per NFS-70	and NFS-76 are not required on the following	owing items.	·
A. 3-40516-7			
B. 9756-17			
C. 6-41668-3			
D. 3-40521-3 E. 6-41685-3			
F. 3-40512-13			
22. The Forging Shall be Dies/Tooling.	e procured from the Original Forging So	urce, using the Original Certified I	Forging Procedures and
Government that the Cert Bidder to provide Forging B. Prior to Prod AMS-F-7190 for Steel Fo	act Award, The Detailed Part Bidder shatified Dies and Procedures are available ags for their use in the event they are the auction, Forging Lot Qualification shall be orgings and SAE AMS-A-22771 for Alumbid by the Forging Source and shall submit	and the Forging Source has an agree successful Bidder. be accomplished as specified on the minum Forgings. The Detailed Par	Forging Drawing and SAE t Contractor Shall assure that
23. Forging Source, Con	atrol and Location of Dies:		
A. Forging Drawing B. Die Number:	gs:		
C. Control Of Forg	ging Process:		
D. Location of For	ging Dies:		
		I OVALDO!	DATE
PREPARED BY		SYMBOL	DATE
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REV:	ENGINEERING DA	TA REQUIREMENTS CONTINUATION S (ATTACHMENT "A")	SHEET
PART NUMBER		NATIONAL STOCK NUMBER	
7227218-10	,	1620-00-264-074	5 LE
	System Engineer retains all rights to reviews. All Deviations, Minor and Major,		
Specifications, and Stand Component/Assembly.	ward, the Contractor will Certify to the G dards called out and required for the Man Contractor is responsible to completely se ents necessary to manufacture Landing Ge	ufacture of this Contracted Landing arch these Manuals, Specifications,	Gear and Standards and fully
If the Drawing does not it shall be accomplished as The Serialization shat Digit year of Manufactur intermittent contracts shat produces more then 999 it	all begin with the CAGE (FSCM)of the C e, followed by a dash and a sequentially Il start Serialization of item with the next items, the Serial Number should begin us	Shall provide S/N Location Instruction Contractor named on the Contract, for unique 3 digit number. A Contract number in Sequence of the prior C	ollowed by a Dash and the 2 for who receives numerous ontract. If a Contract
like this: "S/N 98747-03	3-001".		
PREPARED BY		SYMBOL	DATE
SANI	DI L. FIELD	LGMPM	20030508
	DE LEE VOI L'Enre Flouri		PAGE 4 OF 4

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-264-0745LE</u> NOUN: <u>Cylinder Assy - NLG</u> PART NUMBER (P/N)<u>7227218-10</u> AIRCRAFT:T-38 & F-5 (A/B)

### SECTION C

### QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 7227218-10 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.
  - (a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-264-0745LE

NOUN: Cylinder Assy - NLG

PART NUMBER (P/N)7227218-10 AIRCRAFT:T-38 & F-5 (A/B)

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$1500.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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CAGE: 76823		MANUFACTÚRER NAME: NORTHROP GRUMMAN CORP EL SEGUNDO CA	L SE(	JUNDE	O CA		REFEREN 3-41606-3	REFERENCE NR: 3-41606-3	NOUN : PISTON LANDING GEAR	NSN :
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	/84C451		_		-	<u> </u>			BCO	
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ALL GOVERNMENT/MILITARY SPECIFICATIONS AND STANDARDS WILL NOT BE FURNISHED. TO OBTAIN THESE SPECS AND STDS WRITE TO: DODSSP BUILDING 4/SECTION D 700 ROBINS AVE. PHILADELPHIA PA. 19111-5098
TELEPHONE: (215) 697-2179
FAX: (215) 697-1462 TO VIEW OR ORDER: HTTP://www.DODSSP.DAPS.MIL.

TO VIEW OR ORDER: HTTP://WWW.DODSSP.DAPS.MIL

# ENGINEERING DATA LIST REMARKS

C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED; FURNISHED METHOD CODE LEGEND:

R - FURNISHED BY PCD UPON REQUEST. P - PARTIAL DOCUMENT FURNISHED. V - VENDOR DRAWING;

O - OTHERS, CONTRACTOR MUST ACQUIRE.

G - GOV'T DOCUMENT.

X - DATA SUPPLIED (NOT IN EDCARS).

	· •				
REV:	ENGINE	EERING DATA REQUIREMENTS (ATTACHMENT "A")			
NOTE: MILITARY SPECIFICA	OTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.  THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF				
. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF  PISTON, NLG ASSY OF  PART NUMBER  3. NATIONAL STOCK NUMBER					
2. PART NUMBER		3. NATIONAL STOCK NUMBER			
3-4	1606-3	1620-00-949-0417 LE			
THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE SURNISHED UNLESS SO INDICATED.  5. Markings and Identification per MIL-STD-130 in lieu of IM-8 and MA-19.9.					
5. Markings and Identi	fication per MIL-STD-130 in lieu of IM-	-8 and MA-19.9.			
6. Safety Procedures P	er NASM20995 and NASM33540 in Lie	u of FH-12.			
7. Install Bolts, Screw	Washers, Pins, Etc. per best shop proce	edure in Lieu of FH-11 and FH-12.			
8. Aircraft lubricant per MIL-HDBK-838 in Lieu of L-3.					
9. Surface Roughness per ANSI B46.1 in Lieu of MIL-STD-10.					
10. Cadmium Plate per SAE-AMS-QQ-P-416A Type II, Class 3 in Lieu of FP-2.					
11. Heat Treat per SAE AMS-H6875 in Lieu of HT-3.2.					
12. Solid Film Lubricant per MIL-L-46010 Type 1 or MIL-L-23398 in Lieu of MAI1115 and L-6.					
13. Threads per MIL-S8879, Safety Critical, in Lieu of FH-32.					
14. Perform Magnetic Particle inspection per ASTM E 1444 in Lieu of MIL-I-6868. Use full wave direct current (FWDC). Wet continuous method, Fluorescent Type with the following acceptance/rejection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED. is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a level III as specified in NAS-410.					
15. Perform Fluorescent penetrant inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of MIL-I-6866 with the following Acceptance/Rejection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410.					
6. Chrome Plate Per MIL-STD-1907. Type 1 Class 2 in Lieu of FP-6.1.					
17. Shot Peen per SAE	AMS-S-13165 in Lieu of MA-57.				
	d, the successful bidder shall provide a co To LGHLEN for Final Review before pr	opy of the processing documentation (Routing Documents and roduction begins.			
	crepant item. All Deviations, Minor and	review and accept Material Review Board (MRB's) Dispositions Major, From the Engineering Drawing Package shall be			
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REV:	ENGINEERING DA	TA REQUIREMENTS JONTINUATION	SHEET	
		(ATTACHMENT "A")		
PART NUMBER		NATIONAL STOCK NUMBER		
3-41606-3	,	1620-00-949-0417 LE		
Specifications and Standa Contractor is responsible	ard, the Contractor shall certify to the Goards called out and required for the Manu to completely search these Manuals, Special Landing Gear Components. Any Quest	facture of this contracted landing G ecifications and Standards and fully	ear Component/Assembly. understand the requirements	
	rm Coating of Primer per MIL-PRF-233 to fully cure prior to installation of Bush			
22. Per Flag Note 8, Dr	awing 2007302, install bushings per the	following in Lieu of MM5743:		
Housing into which the b	stallations shall e accomplished in such a bushing is installed, or the finish of the bushing is not permitted, and is not acceptaby the housing bore, or to seat the bushing the statement of the seat the bushing bore.	ushing. Forced installation of Sub- le. A small non-metallic Hammer r	Zero installations, such as	
B. Prior to Bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.				
C. Liquid Nitrogen shall be used for all Sub-Zero installations unless some other Sub-Zero coolant is specified and approved by OO-ALC/LGHLEN Engeering. The soak time of the bushing in the Liquid Nitrogen shall be Sufficient to allow the bushing to reach the same temperature as the coolant.				
D. The Bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trail runs shall be accomplished as necessary to minimize installation time which should be in order of about seven (7) seconds maximum.				
E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process will not have Paint, Sealant or other Organic Material Applied prior to Heating. The parts shall be heated by the use of Radiant Heat Techniques, such as Thermal Blankets, Infrared Lamps ETC.; To the maximum temperature of 250F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling, oxidation or corrosion shall be permitted.				
F. Bushings without Flanges shall be installed into Housing Bore which has received a light coat of Sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of Both Ends of the Bushing.				
G. Bushings with Flanges shall be installed in a similar Manner as paragrahp (F) except Sealant shall also be applied to Face of Lug under Flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside faace of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange. Wipe off any excess sealant from other end of bushing also.				
	with external Grease Grooves, the inside ug will be coated with MIL=PRF-81733			
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	ENGINEERING DA	ATA REQUIREMENTS CONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER	<u> </u>	NATIONAL STOCK NUMBER	
3-41606-3	•	1620-00-949-0417 LE	
	s per MIL-STD-867. Grinding shall be		shall be inspected for abusive
24. The Forging Shall be Dies/Tooling.	e procured from the Original Forging Sc	ource, using the Original Certified	Forging Procedures and
Government that the Cert	act Award, The Detailed Part Bidder sha ified Dies and Procedures are available is for their use in the event they are the s	and the Forging Source has an agree	
AMS-F-7190 for Steel Fo	fuction, Forging Lot Qualification shall by orgings and Sae AMS-A-22771 for Alumided by the forging source and shall submitted by the forging source and shall submitted.	ninum Forgings. The Detailed Part	Contractor Shall assure that
25. Forging Source, Cor	ntrol and Location of Dies:		
Forging Drawings: 3-4	1606-1F ABD 3-41605-11F.		
Die#: Unknown and 78	874		·
Control Of Forging Pro	cess: Northrop		
Location of Forging Die	es:		
KROPP FORGE COME 5301 W. Roosebelt Roa CICERO, IL 60650-12' PHONE: (708) 652-66 CAGE: OBFN1	d 73		
INTENT TO PROCURE NOT PROCEED TO OB' GOVERNMENT PROCU DEVELOPED UNDER T AT THE SAME TIME T	ACT AWARD, THE CONTRACTOR S NEW FORGING DIES AND THE PRO TAIN NEW FORGING DIES WITHOU JRING ACTIVITY. THE GOVERNMI THIS CONTRACT. THE CONTRACT HE ORDER FOR THE DIES IS PLACE AND FORWARD A COPY OF THIS L	OPOSED FORGING SOURCE: TI IT THE EXPRESS WRITTEN COI ENT SHALL HAVE UNLIMITED OR SHALL INFORM THE FORG ED, THAT THE GOVERNMENT	HE CONTRACTOR SHALL NSENT OF THE USE OF THE DIES ING HOUSE IN WRITING, HAS UNLIMITED USE
PREPARED BY		SYMBOL	DATE
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OO-ALC FORM 462 OCT 90	C (FE 1/2) (FarmFlow)	<u> </u>	PAGE 3 OF 3

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-949-0417LE NOUN: Piston, NLG

PART NUMBER (P/N)<u>3-41606-3</u> AIRCRAFT:T-38

### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>3-41606-3</u> and specification <u>MIL-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-949-0417LE</u> NOUN: Piston, NLG

PART NUMBER (P/N)3-41606-3 AIRCRAFT:T-38

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$1500.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority LGHLEN can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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REV:	ENGINE	ERING DATA REQUIREMENTS	3	
		IATTACHMENT "A")		
NOTE: MILITARY SPECIFICATION  1. THE FOLLOWING INSTRUCT	ONS I/STANDARDS WILL NOT BE FURNISHED IN IONS ARE FURNISHED FOR THE MANUFACTURE	THE BID SET.		
	CYLINDER ASSY, NI			
2. PART NUMBER		3. NATIONAL STOCK NUMBER		
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4. THE FOLLOWING SPECIFICA FURNISHED UNLESS SO INDICA	TIONS/STANDARDS, ETC., WILL BE USED IN LIE TED.	U OF THE DATA INDICATED. THE SUPER	SEDED DATA WILL NOT BE	
DRAWING 7227216-10	S/S's DRAWING 6-40602-7 (9) IN PA	ART.		
5. Identify Per MIL-STE	0-130 in lieu of IM-8 and MA-19.1.			
6. Threading Per SAE A	S-8879, Safeaty Critical, in lieu of FH-	32.		
7. Install Bushings with	Locktite Process per the following in lie	u of FH-19 and MA-103.		
Housing into which the Bu the use of a Press or Hami	lations shall be accomplished in such a sishing is installed, or the Finish of the Emer in not permitted, and IS NOT accept the Housing Bore, or to Seat the Bush	Bushing. Forced installation of Sutable. A small Non-Metallic Ham	b-Zero installations, such as	
B. Prior to Bushing Installation, the Parts and Housing Bore shall be cleaned with a cleaning solvent to remove all contamination.				
C. Liquid Nitrogen shall be used for all Sub-Zero installations unless some other Sub-Zero Coolant is specified, and approved by OO-ALC/LGHLEN Engineering. The soak time of the Bushing in the Liquid Nitrogen shall be sufficient to allow the Bushing to reach the same temperature as the Coolant.				
D. The Bushing shall be installed into the Housing immediately upon removal from the Coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about sever (7) seconds maximum.				
Cooling of the Bushing. It heating, the parts shall be the maximum temperature	E. It may occasionally be necessary to heat the Housing into which the Bushing is to be installed, in addition to Sub-Zero Cooling of the Bushing. Detail parts in process, which do not have Paint or Sealant or other Organic Material applied prior to heating, the parts shall be Heated by the use of Radiant Heat Techniques, such as Thermal Blankets, Infrared Lamps, ETC.: to he maximum temperature of 250 F. The temperature measuring devices shall be used to monitor heat and shall be located on treas of the part expected to reach maximum temperature. No Scaling, Oxidation, or Corrosion shall be permitted.			
F. Bushings without Flanges shall be installed into Housing Bore which has received a Light Coat of Sealant per MIL-PRF-81733. Install Shrunken Bushing and wipe off any Excess Sealant that may have Extruded around the Periphery of both ends of the Bushing.				
G. Bushings with Flanges shall be installed in a similar manner as paragraph (F) except sealant shall also be applied to Face or Lug under Flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of Bushing Flange when Bushing is installed. Wipe off any excess Sealant around Periphery of Bushing Flange forming a Bead. Wipe any excess Sealant from other end of Bushing also.				
H. For Bushings with I installation and Face of Lu	External Grease Grooves, the inside of t g will be coated with MIL-PRF-81733 p	he Lug will be coated with MIL-Coer paragraph G, If Bushing is Flan	C-16173 prior Bushing nged.	
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PART NUMBER		NATIONAL STOCK NUMBER	
7227216-10	,	1620-00-264-0750 LE	
8. Shot Peen per SAE A	AMS-S-13165 in Lieu of MP-207.		
9. Ultrasonic Inspection	n per SAE AMS-STD-2154 Type 1 class	s A, in lieu of IT-32.5.	
10. Sulfuric Anodize per	SAE AMS-A-8625 Type II, Class 1 in	lieu of FP-3.	
Wet Continuous Method, intent of NO DEFECTS A	fluorescent type with the following accurate ALLOWED is that the inspection is cone inspection performing the Inspection with as specified in NAS-410.	eptance/rejection criteria: NO DEI ducted at the required sensitivity le	EECTS ALLOWED. The vel and there shall be no
the following Acceptance inspection is conducted a	penetrant inspection per ASTM E 1417, /Rejection Criteria: NO DEFECTS AL t the required Sensitivity Level and ther ed to Level II with the inspection proced	LOWED. The intent of NO DEF e shall be no indications allowed.	ECTS ALLOWED is that the The inspector performing the
13. Application of Sealin	g, Locking, and Retaining Compounds	Use MIL-R-46082(IN4D), Type II	in lieu of MA-103.
14. Heat Treat per SAE	AMS-H-6875 in lieu of HT-3.4.		
15. Heat Treat for Beryll	ium Copper per SAE AMS-H-7199 in L	Lieu of HT-9.2.	
16. Heat Treat per SAE	AMS-H-6088, in lieu of HT-1.		
17. Cadmium Plate per S	AE AMS-QQ-P-416. Type II, Class 2	in lieu of FP-2.	
18. MATERIAL SPECIF	FICATION QQ-A-268 has been S/S by	SAE AMS-QQ-A-225/6A	
1. One coat epox	nt System per the following:  Ty primer per MIL-PRE-23377.  Coat per MIL-PRF-85285, colow: White	e #17925 per Fed-Std-595.	
<ol> <li>One Coat Epo</li> </ol>	nt system may be applied as an alternate xy Primer, waterborne per MIL-PRF-85 pcoat per MIL-PRF-85285, Type 1, Co	5582, Type I, Class 2.	
`19. Surface roughness p	er ASME B46.1, in lieu of ANSI B46.1		
PREPARED BY		SYMBOL	DATE
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PART NUMBER			NATIONAL STO	K NUMBER	
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20. The Forging Shall be Dies/Tooling.	procured from the	ne Original Forging So	ource, using the	Original Certified	Forging Procedures and
A. Prior to Contra Government that the Cert Bidder to provide Forging	ified Dies and Pro	etailed Part Bidder shocedures are available the event they are the	and the Forging	Source has an agre	orging Source, to the ement with the Detail Parts
B. Prior to Prode AMS-A-22771 for Alumin Forging Source and shall	num Forgings. T	he Detailed Part Cont	ractor Shall assu	re that this has been	Forging Drawing and SAE accomplished by the
21. Forging Source, Con	trol and Location	of Dies:			
A. Forging Drawing	gs:	6-40602-11F			
B. Die Number:		Unknown			
C. Control Of Forg	ing Process:	Northrop			
D. Location of Forg	ging Dies:	Unknown			
22. INSTRUCTIONS FO	OR QUALIFICA	TION OF NEW FO	RGING SOUR	CE;	
Dies and the Proposed For	rging Source. The Co	e contractor SHALL lontractor WILL reque	NOT proceed to st written instru	obtain new Dies w	to procure new Forging ithout the Express Consent of C/LGHLEN and the System se of the Dies
					·
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PART NUMBER		NATIONAL STOCK NUMBER	
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22. OO-ALC/LGHLEN System shipment of Discrepant Items. A MRB Disposition.	Engineer retains all rights to re	view and accept Material Review r, from the Engineering Drawing	Boards (MRB's) prior to Package will be submitted for
Specifications, and Standards ca Component/Assembly. Contract	alled out and required for the Ma for is responsible to completely s	Government in writing full compunufacture of this Contracted Landsearch these Manuals, Specifications Gear Components. Any questions	ing Gear ns. and Standards and fully
If the Drawing does not indicate shall be accomplished as follows. The Serialization shall begin	a Location, OO-ALC/LGHLEN  i with the CAGE (FSCM)of the	.09" LETTERS 0.004" - 0.007" shall provide S/N Location Inst	ructions. Serialization of item
intermittent contracts shall start S	Serialization of item with the nex	y unique 3 digit number. A Conti at number in Sequence of the prior using 4 Digit Serial Numbers. The	Contract. If a Contract
		•	
REPARED BY		SYMBOL	DATE
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O-ALC FORM 462, OCT 96 (EF-V2)	(FormFlow)		PAGE 4 OF 4

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-264-0750LE</u>

NOUN: Cylinder Assy - MLG

PART NUMBER (P/N)72272216-10 AIRCRAFT:T-38 & F-5 (A/B)

### SECTION C

### QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>72272216-10</u> and specification <u>MIL-A-22771</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.
  - (a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-264-0750LE NOUN: Cylinder Assy - MLG

PART NUMBER (P/N)72272216-10 AIRCRAFT:T-38 & F-5 (A/B)

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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	(ATTACHMENT "A")  TE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.					
	MILITARY SPECIFICATIONS I/STANDARDS E FOLLOWING INSTRUCTIONS ARE FURNISH					
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	E FOLLOWING SPECIFICATIONS/STANDARD SHED UNLESS SO INDICATED.	)S, ETC., WILL BE USED IN LIE	U OF THE DATA INDICATED. THE SUPERS	SEDED DATA WILL NOT BE		
a.	Machine to meet drawing requires	ments per LAC 0701, in	lieu of DS30003.			
b.	shall be vibropeened, steel stamped, or rubber stamped, where needed in 0.09" letters 0.004" - 0.007" deep in the location indicated. If the drawing does not indicate a location, OO-ALC/LILE will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract, followed by a dash and the two (2) digit year of manufacture, followed by a dash and a sequentially unique three (3) digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 1000 items, the serial number should appear like this: "S/N 98747-03-001"					
c.	. Heat treat per SAE AMS-H-6875, in lieu of STP 54-006.					
<b>d</b> .	Penetrant inspect per ASTM E1417, Type I, Method B or C, Level 3 or 4, in lieu of STP 53-201. With the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be level II certified, with the inspection procedure developed by a level III as specified in NAS-410.					
e.	Magnetic particle inspection per ASTM E1444, in lieu of MIL-I-6868. Use fluorescent type, full wave direct current (FWDC), and wet continuous method. With the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be level II certified, with the inspection procedure developed by a level III, as specified in NAS-410.					
f.	Any surface ground/machined afte Grinding shall be per MIL-STD-8	•	pected for burns per MIL-STD-867,	in lieu of STP 54-006.		
g.	Shot peen to meet drawing requirements per SAE AMS-S-13165, in lieu of STP 51-501.					
h.	Assemble wet with TT-P-1757, in lieu of MIL-P-8585.					
i.	Cement using best aircraft industry standards in lieu of STP 60-505. Use 3M Co. EC-2216 B/A adhesive. Install immediately after applying adhesive, in lieu of DS 30002. (Ref. Note 22 on drawing 4G13490)					
g.	g. Dimessioning and tolerincing per ASME Y14.5M.					
PREPAF	RED BY		SYMBOL	DATE		
	ORIN HATCH		LGMPM	8 May 03		

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PART N	IUMBER	<u> </u>	NATIONAL STOCK NUMBER		
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	Drilling, reaming, and honing to meet drawing specifications, using best shop procedures and the following notes in lieu of STP 51-410.				
a.	High speed steel (	HSS) drills shall be used to drill corre	sion resistant steels.		
b.		be used for rough reaming, and final-speed tipped reamers will be used for			
c.	reaming. Holes sh larger than 1/4 inc	er be used as a final machining operational be finished by reaming or boring. In the holes will be piloted with a cerube used as a final surface producing reference.	When jigs, fixtures, or bushings are a stee of the drill. Chemical, electrical, or electrical, or electrical.	not used for drilling holes strochemical hole producing	
d.		all be of 150 to 500 alumium oxide grandshoes or wipers shall not be used.	t with a medium-hard bond and prefe	rably a multi-head stone.	
e.	Rough reaming, the reamer length shall be as short as consistent with required penetration. Final reaming, the diameter cut shall produce a hole that meets the requirements of the engineering drawing.				
f.		sed as a final operation where a surfacted by other means.	e finish better than 125 roughness hei	ght ratio is required, and	
g.	g. Carbide drills can be operated at higher speeds that HSS drills, but must be used with caution. Thay must not be used in dull or chipped condition.				
6. T	The following changes have been made in materials and specifications required.				
a.	. Use Air Force drawing 9825011 as required, in lieu of AND10050.				
b.	Use SAE AMS 5515, in lieu of AMS 5515. (Ref. drawing 4G13490-111)				
c.	Use SAE AMS 4535, in lieu of QQ-C-530, and AMS 4535, If tubing is used. (Ref. 4G13774, and ECO 95C513)				
d.	Use SAE AMS 4881, in lieu of SAE 4881. (Ref. drawing 4G13491)				
e.	Use SAE AMS 62	57, in lieu of STM 05-501. (Ref. dra	wing (4G11424)		
PREPAR	ED BY		SYMBOL	DATE	
	ORIN	HATCH	LGMPM	8 May 03	

REV:		T				
		ENGINEERING DA	ATA REQUIREMENTS CONTINUATION (ATTACHMENT "A")	SHEET		
PART I	NUMBER		NATIONAL STOCK NUMBER			
	4G11414-107	7 <b>.</b>	1620 00 417 6249	LE		
6. I	Finish per the follow	ving in lieu of DS 30000, and finish code	es CC, C, D, M, and 17, 53, 54,	74-74.		
a.	Cadmium plate pe	er MIL-STD-1500, Type II, Class 2. (cox	de CC) (Ref. drawing 4G11414)			
b.	Cadmium plate pe C. (Ref. drawing	er MIL-STD-870, Type II, Class 2or 3, t gs 4G11414, 4G13490, and 4G13491)	to meet drawing requirements, in li	ieu of STP 58-020, and code		
c.	Chromium plate po (code D) (Ref. d	ocr MIL-STD-1501, Class 1, Type 1 or II drawing 4G11414)	I, on I.D. (note 15) Class 2, Type	II, on the O.D. (note 16)		
d.	Passivate per SAE	E AMS QQ-P-35, Type optional. (code l	M) (Ref. drawing 4G13490)			
e.	Primer wash is not	t required. (code 17)				
f.	Corrosion inhibiting	ng per MIL-PRF-46010. (code 53) (Ref.	. drawing 4G13490)			
g.	One coat of epoxy MIL-PRF-23377,	primer per MIL-PRF-85582, Type I, C Type I.	lass 2. (code 54). Alternate, One	coat of epoxy primer per		
h.	h. Two coats of top coat per MIL-PRF-85285, Type I. (color white, No. 17925 per FED-STD-595). (code 74-74)					
7. N	7. Material Review Board disposition:					
a.	OO-ALC/LLGHLE discrepant item. Al disposition.	EN system engineering retains all rights t Il deviations, minor and major, from the	to review and accept MRB disposite engineering drawing package will	ions prior to shipment of be submitted for MRB		
	The required forgings lies.	s will be procured from the qualified for	ging source using the original certi	fied forging procedures and		
a.	a. Prior to contract award, the detail part bidder will provide certification, from the forging source to the government, that the certified dies and forging procedures are available and that the forging source has an agreement with the detail part bidder to provide forgings for his use in the event that he is the successful bidder.					
b.	b. Prior to production, forging lot qualification will be accomplished as specified on the forging drawing, 4G52470 and SAE AMS-F-7190. (For steel forgings) The contractor will assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment to the government.					
REPAR	ED BY		SYMBOL	DATE		
	ORIN HA	АТСН	LGMPM	8 May 03		

REV:	FNGINEERING DA	ATA REQUIREMEN. CONTINUATION	ALLEGO			
	ENGINEERING DA	(ATTACHMENT "A")	SHEET			
PART NUMBER		NATIONAL STOCK NUMBER				
4G11414-10	)7,A 	1620 00 417 6249	LE			
9. FORGING SOURCE	E, CONTROL AND LOCATION OF D	IES:				
a. Forging drawing:	Lockheed Mart. 4G11424-991A (CA	AGE 98897)				
b. Control of forging	g process: B.F.Goodrich. (CAGE 130	002)				
c. Location of forgin	ng dies: Cameron Iron Works. (CA	GE 10447)				
d. Die number: 73	797		·			
		CAGE 98897)				
· -	process: B.F.Goodrich. (CAGE 13					
h. Die number: 821						
10. The following specif	fications are not required for the manufac	cture of this item.				
a. Static test X999, a	and DS 5025.					
b. AGE CEI MRO15	51A, 4S51102, 4S51665, 4S51224, and	CP40301.				
PREPARED BY		SYMBOL	DATE			
ORIN HA	ТСН	LGMPM	8 May 03			

(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-417-6429LE NOUN: PISTON ASSY, MLG PART NUMBER (P/N) 4G11414-107A AIRCRAFT: C-5

### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offerer an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offerer.
- 2. The offerer must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offerer is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offerer will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawings, P/N 4G11424-991A and specification SAE AMS-F-7190, and P/N 4G13774-991A. The offerer shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the precontract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-417-6429LE NOUN: PISTON ASSY, MLG

PART NUMBER (P/N4G11414-107A AIRCRAFT: C-5

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2000
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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# "PROJECT RIGHTS GUARD"

# ENGINEERING DATA LIST REMARKS

DRAWING(S) IDENTIFIED BY AN ASTERISK \* AND (P) ARE CLAIMED PROPRIETARY AND

R - CLASSIFIED DOCUMENT.

S - FURNISHED WITH SOLICITATION.

HANDLED IAW THE RIGHTS GUARD DATA BASIC ORDERING AGREEMENT F34601-92-0-1120

FURNISHED METHOD CODE LEGEND:

G - GOV'T DOCUMENT. X - DATA SUPPLIED (NOT IN EDCARS). R - FURNISHED BY PCD UPON REQUEST. P - PARTIAL DOCUMENT FURNISHED. V - VENDOR DRAWING.

<sup>0 -</sup> OTHERS, CONTRACTOR MUST ACQUIRE.

REV:	*				
nev.	ENGINEERING DATA REQUIREMENTS  (ATTACHMENT "A")				
	NS I/STANDARDS WILL NOT BE FURNISHED IN T ONS ARE FURNISHED FOR THE MANUFACTURE				
	R ASSY - SHOCK STRUT, NOSE LAI				
2. PART NUMBER		3. NATIONAL STOCK NUMBER			
975509-10		1620-00-195-4810LE			
4. THE FOLLOWING SPECIFICAT FURNISHED UNLESS SO INDICAT	4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.				
5. SHOT PEEN PER SAI	E <b>AMS-S-13165</b> IN LIEU OF MIL-S-1	3165 PER DRAWING REQUIREN	MENTS.		
4 IN LIEU OF MIL-S-686 ALLOWED. THE INTE REQUIRED SENSITIVIT PERFORMING THE INSI	CENT PENETRANT INSPECTION P 6, WITH THE FOLLOWING ACCEP NT OF NO DEFECTS ALLOWED IS Y LEVEL AND THERE SHALL BE N PECTION SHALL BE CERTIFIED TO EL III AS SPECIFIED IN NAS-410.	TANCE/REJECTION CRITERIA: THAT THE INSPECTION IS CO O INDICATIONS ALLOWED. T	NO DEFECTS NDUCTED AT THE THE INSPECTOR		
7. PER DRAWING 97550	09 USE MATERIAL SAE AMS 4111 I	IN LIEU OF AMS 4111.			
8. USE MIL-STD-7179 I	N LIEU OF MIL-F-7179.				
	POXY WATERBORNE PRIMER PER 82-12. ALTERNATE ONE COAT OF				
	OATS POLYURETHANE PER MIL- F MIL-C-85285 AND M85285-1.	PRF-85285, TYPE I, COLOR NU	MBER 17925 (WHITE) PER		
11. MARK AND IDENTI	IFY PER MIL-STD-130 IN LIEU OF I	BAC 5307, (P/N 63-2030-1).			
12. FOR FINISH CODE	F-4.202, (DWG 63-2030), CADMIUM	PLATE PER QQ-P-416, CLASS	S, TYPE I.		
13. BAC 5005, BACD 2097 AND DWG 2-5000 ARE NOT REQUIRED FOR MANUFACTURE.					
14. INSTALL BUSHINGS PER THE FOLLOWING:					
A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.					
B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.					
SUB-ZERO COOLANT IS	EN SHALL BE USED FOR ALL SUB- S SPECIFIED, AND APPROVED BY O LIQUID NITROGEN SHALL BE SUFI AS THE COOLANT.	OO-ALC/LILEC ENGINEERING.	THE SOAK TIME OF		
	"P	ROJECT RIGHTS	GUARD"		
PREPARED BY		SYMBOL	DATE		
CAROL HYER		LGMPM	22 Mar 02		

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REV:	ENGINEERING DA	TA REQUIREMENT "A")	N SHEET
PART NUMBER		NATIONAL STOCK NUMBER	
975509-10	,	1620-00-195-4810LE	
COOLANT WITH AN A	HALL BE INSTALLED INTO THE HOU ABSOLUTE MINIMUM OF LOST TIME MIZE INSTALLATION TIME WHICH	E. TRIAL RUNS SHALL BE AC	CCOMPLISHED AS
INSTALLED, IN ADDIT HAVE PAINT OR SEAL BE HEATED BY THE U ETC.; TO THE MAXIM MONITOR HEAT AND	IONALLY BE NECESSARY TO HEAT FION TO SUB-ZERO COOLING OF THE ANT OR OTHER ORGANIC MATERIA ISE OF RADIANT HEAT TECHNIQUE UM TEMPERATURE OF 250 F. TEM SHALL BE LOCATED ON AREAS OF SCALING, OXIDATION, OR CORROSI	IE BUSHING. DETAIL PARTS AL APPLIED PRIOR TO HEAT S, SUCH AS THERMAL BLAN IPERATURE MEASURING DE THE PART EXPECTED TO RI	S IN PROCESS WILL NOT TING, THE PARTS SHALL IKETS, INFRARED LAMPS VICES SHALL BE USED TO
LIGHT COAT OF SEAL	THOUT FLANGES SHALL BE INSTAL ANT PER MIL-PRF-81733. INSTALL HAVE EXTRUDED AROUND THE PE	SHRUNKEN BUSHING AND V	VIPE OFF ANY EXCESS
SEALANT SHALL ALSO A MANNER AS TO ENS INSTALLED. WIPE OF	H FLANGES SHALL BE INSTALLED I O BE APPLIED TO FACE OF LUG UN SURE COMPLETE COVERAGE OF IN FF ANY EXCESS SEALANT AROUND ER END OF BUSHING ALSO.	DER FLANGE. SEALANT SH SIDE FACE OF BUSHING FLA	ALL BE APPLIED IN SUCH
	WITH EXTERNAL GREASE GROOVE BUSHING INSTALLATION AND FAC SHING IS FLANGED.		
BOARD'S (MRB'S) DIS	STEM ENGINEERING RETAINS ALL POSITIONS PRIOR TO SHIPMENT OF NGINEERING DRAWING PACKAGE S	F DISCREPANT ITEM. ALL D	EVIATIONS, MINOR AND
FULL COMPLIANCE W THE MANUFACTURE ( RESPONSIBLE TO COM UNDERSTAND THE RE	ACT AWARD, THE CONTRACTOR SHOUTH MANUALS, SPECIFICATION, AND OF THIS CONTRACTED LANDING GOVERNMENTS SEARCH THESE MANUAL EQUIREMENTS NECESSARY TO MANORWARDED TO OO-ALC/LILE.	ND STANDARDS CALLED OU EAR COMPONENT/ASSEMBL LS, SPECIFICATIONS, AND S	UT AND REQUIRED FOR Y. CONTRACTOR IS FANDARDS AND FULLY
	T AWARD, THE SUCCESSFUL BIDDE DUTING DOCUMENTS AND PROCES I BEGINS.		
	"PR	OJECT RIGHTS	GUARD"
PREPARED BY		SYMBOL	DATE

**LGMPM** 

22 Mar 02

PAGE \_

\_OF \_

**CAROL HYER** 

REV:	ENGINEERING D	ATA REQUIREME CONTINUATION SHEET  (ATTACHMENT "A")
PART NUMBER		NATIONAL STOCK NUMBER
975509-10	,	1620-00-195-4810LE
- 0.007" DEEP IN THE OO-ALC/LILE SHALL ACCOMPLISHED AS F NAMED ON THE CON BY A DASH AND A SE INTERMITTENT CON'OF THE PRIOR CONT	LOCATION INDICATED. IF THE DIPROVIDE S/N LOCATION INSTRUCTOLLOWS: THE SERIALIZATION SHOULD BY A DASH AND EQUENTIALLY UNIQUE 3 DIGIT NUTRACTS SHALL START SERIALIZATION.	IBRATING PNEUMATIC PENCIL) IN 0.09" LETTERS 0.004" RAWING DOES NOT INDICATE A LOCATION, TIONS. SERIALIZATION OF ITEM SHALL BE IALL BEGIN WITH THE CAGE OF THE CONTRACTOR ND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED MBER. A CONTRACTOR WHO RECEIVES TION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE TO MORE THAN 999 ITEMS, THE SERIAL NUMBER SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N
19. PER DRAWING 73 ASSY IS DWG <b>975509</b> -		-05 OUTER CYLINDER FORGING IS PREFERRED. NEXT
	ALL BE PROCURED FROM THE OR PROCEDURES AND DIES/TOOLING	IGINAL FORGING SOURCE, USING THE ORIGINAL
THE FORGING SOURCE AVAILABLE AND THI	CE, TO THE GOVERNMENT THAT T	ART BIDDER SHALL PROVIDE CERTIFICATION, FROM HE CERTIFIED DIES AND PROCEDURES ARE EMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE IE SUCCESSFUL BIDDER.
THE FORGING DRAW FORGINGS. THE DET	ING AND SAE AMS-F-7190 FOR STE AILED PART CONTRACTOR SHALL	CATION SHALL BE ACCOMPLISHED AS SPECIFIED ON EL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY DOCUMENTATION OF ACCOMPLISHMENT TO THE
21. FORGING SOURC	E, CONTROL OF FORGING DIES AN	ID THE LOCATION OF DIES:
A. FORGING DRA	AWING: CD7327021-03 (ALCOA DW : F-18285	<b>G</b> )
B. CONTROL OF F	ORGING DIES: U.S. GOV'T ROBINS	AFB
C. LOCATION OF	FORGING DIES: ALCOA FORGING I 1600 HARVARD AVI CLEVELAND, OH 4 PHONE: (216) 641-4 POC: MIMI	ENUE 4105-3040

PREPARED BY	SYMBOL	DATE
CAROL HYER	LGMPM	22 Mar 02
OO-ALC FORM 462, OCT 96 (EF-V1) (PerFORM PRO)		PAGE 3 OF 3

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-195-4810</u> **L E** NOUN: <u>OUTER CYL. ASSY, NLG</u> PART NUMBER (P/N)<u>975509-10</u> AIRCRAFT:KC-135

### SECTION C

### QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>975509-10</u> and specification <u>MIL-A-22771</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.
  - (a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-195-4810</u>LE NOUN: OUTER CYL, ASSY, NLG PART NUMBER (P/N)<u>975509-10</u> AIRCRAFT:KC-135

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2500.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

# Competitive Landing Gear Strategic Sourcing Initiative

# **RFP Questions / Comments**

RFP F42630-03-R-3321 (Non-Set Aside) RFP F42630-03-R-3322 (Set Aside)

To submit a question or comment in reference to the above listed RFPs...

- Complete the following document
- Use the **tab** key to move between the form fields
- Email the completed document to Salli Beringer at salli.beringer@hill.af.mil.

A response will be emailed to you in a timely manner. All questions and comments received will be posted at <a href="http://contracting.hill.af.mil/newcontracting/Opportunities/Commodities/2003RAAAE/LGSI.htm">http://contracting.hill.af.mil/newcontracting/Opportunities/Commodities/2003RAAAE/LGSI.htm</a> in the "RFP Question / Comment Responses" document.

### Contact information

Company Name

Company Address

Contact Name

Contact Phone Number

Contact Email Address

# Select the RFP the question / comment pertains to.

-Select RFP-

# Select the Section of the RFP the question pertains to.

-Select RFP Section-

# Select the category the question / comment pertains to.

-Select Category-

Question / Comment

Please include NSN as applicable